FEEDSTUFFS

The Weekly Newspaper for the Feed Industry

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Corn, Wheat, Oats Eyed Optimistically

By F. C. BISSON
Special Correspondent

CHICAGO—C. M. Galvin, the last remaining private crop estimator, continues to look upon the 1960 wheat, corn and oats crop prospect with an optimistic eye.

On corn, despite all the talk about late planting, too much rain both before and right after the seed went into the ground and abnormally low temperatures during May, June and a very substantial portion of July, he figures on a crop of 4,173,268,000 bu. While the latter does fall short of the abnormally large production of 1959, if harvested, it will rank as the second highest in our agricultural history in that it will exceed the crop grown in 1958 by more than 300 million bushels.

Mr. Galvin visualizes a per acre yield just short of 50 bu., even in the face of all of the seeming handicaps that Mother Nature has thrown in the path of the corn crop this year. If harvested, this would not be far short of last year's phenomenal 51.5 bu. and would be more than 8 bu. per acre in

(Turn to GALVIN, page 101)

Delaware Exploring Potential of Feed 'Expander' Process

By Special Correspondent

NEWARK, DEL.—A new method of converting soybeans into poultry and livestock feed has been described here by its developer, an enthusiastic University of Delaware agricultural engineer, as having the potential of gaining recognition as the most efficient yet devised.

The process, which in its initial

(Turn to PROCESS, page 8)

HOWARD HOYT, agricultural engineer at the University of Delaware, has been experimenting with a process to cook soybeans to be used in broiler feed.

FEEDSTUFFS *Features This Week*

MILO FEEDING—A report on a college study on milo feeding value is given on page 18.

SPECIAL MIXES—A Washington feed firm, which has built its business on special feed mixes and long-range programs, is described on page 40.

DAIRY FEEDS—The operation of a California firm specializing in dairy feeds is related on page 60.

HIGH ENERGY RATIONS—A report on the acceptance of high concentrates in California is given on page 62.

ENVIRONMENT—"Environment can make or break a laying operation," says an industry poultry researcher. Page 75.

FEED COSTS—First in a series of articles based on a U.S. Department of Agriculture report on various mixed feeds cost in the Midwest is given. Page 82.

—REGULAR FEATURES—

Putting Research to Work	26	Convention Calendar	72
Feed Control Comment	28	Joe Brooks	86
Worth Looking Into	68	Feed Markets in Detail	98

J. A. Cooper Named Executive V. P. of Professional Feeds

KANSAS CITY—Appointment of Joseph A. Cooper as executive vice president of the Professional Feeds division of Spencer Kellogg & Sons, Inc., Kansas City, was announced this week by Thomas W. Staley, president. Mr. Cooper succeeds Maurice Johnson who has resigned effective Oct. 1, when he will join the First National Bank in Kansas City as vice president.

Mr. Cooper was in the feed brokerage business prior to joining the company in 1950. He was in charge of purchasing until 1957. He then was appointed manager of the St. Louis division, where he has handled sales,

(Turn to PROMOTION, page 97)

Maurice Johnson Joins K. C. Bank

KANSAS CITY — Appointment of Maurice Johnson, Kansas City feed executive, to the position of vice president of the First National Bank of Kansas City was announced Aug. 5 by Taylor S. Abernathy, president.

Mr. Johnson has resigned as executive vice president of the Professional Feeds division of Spencer Kellogg & Sons, Inc., effective Oct. 1, when he will join the bank. Mr. Johnson's field in his new position will include administrative duties, planning and area development activity for the bank, Mr. Abernathy announced.

A graduate of the University of Minnesota, Mr. Johnson joined the

(Turn to JOINS BANK, page 97)

Broiler, Egg and Hog-Feed Price Ratios Show Favorable Strength from June to July

WASHINGTON—The hog-corn ratio continued to show substantial strength by climbing 0.4 from June 15 to July 15 to a level well above a year ago, the U.S. Department of Agriculture reports.

Meanwhile chicken-feed and turkey-feed ratios dropped and broiler-feed and egg-feed ratios rose slightly during the period of mid-June to mid-July. (See tables on page 101.)

The hog-corn ratio rose from 14.8 in June to 15.2 in July, firmly above the 11.9 ratio in July last year. This July figure also was considerably over the 10-year July average of 14.

The chicken-feed ratio fell from 3.8 to 3.7, with a 4.5 to 4.0 drop in New England contributing most to the decline. However, the 3.7 figure still was above the 3.2 ratio last July.

The turkey-feed ratio declined from 7.1 to 6.9 in July, with an 8.6 to 8.0 decline in the mid-Atlantic causing much of the drop. However, the 6.9 ratio still was above the 6.5 figure for last July.

The broiler ratio rose to 3.9 from 3.8, putting it 0.6 ahead of last July's 3.3 ratio. The egg-feed ratio also rose 0.1 from 9.3 to 9.4. Gains of 11.4 to 12.5 in the New England area and 9.3 to 9.9 in the Mountain area more than offset a 9.9 to 8.9 decline in the mid-Atlantic. The egg-feed ratio continued above last year's 8.9 ratio.

The milk-feed ratio rose from 1.31 in June to 1.38 in July. This compared with 1.33 for July, 1959, and also was above the 10-year average of 1.20 for July.

The butterfat-feed ratio was up to 24.7 from 24.4, also ahead of last July's 24.0 and up on the 10-year July average of 21.4.

Trade Urged To Back Curbs On Pesticides

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON—Top policy makers of the Food & Drug Administration this week urged the feed manufacturing industry to act immediately to start within its own facilities an inspection service to support federal FDA controls over the presence of pesticidal chemicals in ingredients entering the feed package.

These officials, ominously forecasting a new more rigid and strict enforcement of use of additives in food, said it was now necessary for the feed industry collectively to start its own policing of the residues of pesticidal chemicals in components of the feed package.

This information comes as a result of reports or rumors of the alleged hazards of DDT in alfalfa hay and alfalfa meal which is said to now be found in milk in some important areas of the nation.

Thus far, FDA has not been able to nail down these claims with proof, but it is investigating thoroughly.

These FDA officials say the feed

(Turn to CONTROLS, page 97)

Californian Named For AFMA Poultry Research Award

DAVIS, CAL.—The American Feed Manufacturers Assn. 1960 award of $1,000 for outstanding contributions to poultry nutrition research has been awarded to Dr. F. Howard Kratzer, professor of poultry husbandry, University of California here.

Presentation of the award was made at the 49th annual meeting of the Poultry Science Assn. here Aug. 2-5 by Dr. W. W. Cravens, chairman, AFMA nutrition council, and director of research, McMillen Feed Mills, Decatur, Ind.

Selection of the California scientist was made by the Poultry Science Assn.

(A review of papers presented at the meeting will appear in subsequent issues of Feedstuffs.)

Dr. Kratzer has authored or co-

(Turn to AWARD, page 100)

AFMA, Northeast Unit to Adopt Uniform Forms, Accounting System for Egg Men

WASHINGTON — The joint study committee of American Feed Manufacturers Assn. and the Northeastern Poultry Producers Council agreed here this week to develop standard production record forms and a uniform accounting system for egg producers.

The group also discussed the feasibility of compiling a "Poultry Businessman's Handbook" and establishing a poultry business management school to help the industry overcome some of its knottier financial and business management problems.

Work on the production forms has reached final stages of development, while the uniform accounting system is to be undertaken immediately. As soon as this phase of the committee's program is completed, the handbook and school projects will be studied.

These four activities were part of a recommended course of action resulting from the pilot study of the poul-

(Turn to SYSTEMS, page 100)

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The regional circulation of this issue is concentrated in the northeastern states

The Adjustment

EARNINGS REPORTS ISSUED recently by some of the largest feed manufacturing concerns verify what industry people have been aware of through less clear-cut indications for some time. Business in the past several months has been characterized by stiff competition, narrower margins and some adverse credit experiences. And earnings on feed operations, as a result, have declined.

An underlying cause for at least some of the drop in earnings has been relatively poor feeding ratios—low end product prices in relation to feed costs. This situation always contributes to the margin squeeze and credit difficulties which show up in the final earnings tally.

THERE ARE NOW MANY hopeful signs that the period of poor feeding ratios is waning, and opportunities to improve feed volume and margins will present themselves to the alert feed organizations. Most feed men with whom we have talked have confidence the outlook for the next several months is more favorable than in the early part of this year. On this factor alone, the industry soon should see some more satisfactory figures on its books.

However, the cycles of production increases and changes in relative profits on feeding enterprises will continue, and there is little doubt that the corresponding effects these developments have on the industry's financial well-being will recur in many instances.

There are, at the same time, opportunities to take an optimistic view of the longer-range industry outlook, an outlook that promises to go a long way toward smoothing out ups and downs of farm product price cycles and consequent industry growth and strength. One can spot these indications almost anywhere he looks. Several appear in the earnings reports made available to the public. More are apparent in private conversations with industry executives and with key men in industries serving the feed industry. For quick reference, one can find them in the news columns of Feedstuffs.

THESE SIGNS, for the most part, are not obscure, and one does not need to bathe them in a pink spotlight to bring them into view and make them look better than they are. We mean things like this:

The industry is taking a hard look at its distribution system and making strong moves to bolster sound dealers with better training, better equipment and better all-round facilities. Independent dealers also are modernizing and building. The goal is to provide the kind of service needed by modern agriculture, and the sound dealer-mixer is a key man in providing this service. Some significant decisions have been made in this area which contrast sharply with considerable speculation in recent years about whether the dealer would be in business at all a few years hence. The typical dealer that is being sought after and worked with is a vastly different kind of an operator from the one who is moving out of the picture. He is a vital link in the distribution chain and is being dealt with accordingly by manufacturers.

Other types of distribution are similarly being examined, such as those involving integrated operations, and where opportunities develop and economics give the "go" sign, the industry is participating. Where hard experience dictates otherwise, manufacturers are stepping aside.

Manufacturing efficiency, closely tied to distribution, is getting a going over. Inefficient mills and those poorly located to meet present needs of feeders or out of position from a transportation standpoint are being closed. Size and location of new mills are being determined by the closest attention to economics.

Industry management teams are being streamlined to provide effective, customer-oriented administration of feed service. Technical personnel are being upgraded and getting encouragement to improve products and offer broader service in not only nutrition but other phases of sound feeding operations.

Even the controversial financing area appears to be moving toward sounder ground. A southern economist observed last week that the poultry industry obviously is financing its current expansion, noting that only the stronger and better-managed firms are able to do this.

IN TOTAL, it is evident that the industry is in the midst of a vast adjustment, not yet entirely defined, yet casting before it a shadow that outlines recognition of what must be done to fulfill a truly significant destiny on a profitable basis.

How's Business?

AN EVERY WEEK REVIEW OF FORMULA FEED BUSINESS VOLUME, INCLUDING PRICE, SUPPLY AND DEMAND TRENDS

This particular time of year is usually associated with slow formula feed sales, but reports from several parts of the country are pretty much on the bright side. Generally, except for a "temporary" slump in the Northwest, and rather depressed business in the Southwest, there isn't too much to complain about. The hog-corn ratio, based on Chicago prices, was 15.2 this week, 15.0 a week earlier, and 11.1 the comparable week last year. The index of wholesale feedstuff prices advanced to 74.1 this week. It was 73.4 the preivous week, and 88.2 the same week last year. The feed-grain index, on the other hand, slipped to 65.7 this week from 66.3 last week, and 70.8 a year ago.

Northwest

Nobody seems to be able to put their finger on the problem, but the feed business went into a definite slump the last two days of the week; one manufacturer said sales were down 25% for the week.

It's generally felt that many feeders are concerned now with harvesting small grains, and are therefore letting their feed stocks run low. Some firms have had special promotions on hog feeds during June and July, and therefore aren't selling much of this line now, but this, of course, is regarded as a temporary lull.

It appears that pasture conditions are holding up longer than expected—there has been some light rainfall during the week—because no increases in dairy feed sales have been noted.

Some soybean oil meal was selling for as little as $43 late in the week, reflecting the formula feed sales slump, and most other ingredients were also moving at lower prices than the previous week.

Southwest

Formula feed business in the Southwest showed further contraction this week. Most mills are operating a slow 5-day week with minimum backlog of orders into next week.

The slower business was mostly an across-the-board type, with all lines slower. The good pasture conditions in the area have held back summer cattle feed business along with the recent slump in cattle prices. Hog feed is still selling well, but promotions in this line are partly responsible for the volume. Turkey feed is still the volume item.

Egg prices have picked up some but egg feed business is still at a slow pace.

Most price lists will be slightly lower with major ingredients down. Soybean meal was trading at levels at or near the crop-year low.

Northeast

Formula feed manufacturers were concerned with the wildcat strike of the largest mill in Buffalo. The wheat and oat harvest continued good. End products continued steady during the week, but prices may advance as a result of the strike.

Orders were better than a week ago. The pattern of production was unchanged from a week ago. Egg mashes and growing feeds topped dairy demand, and they in turn were followed by turkey and broiler feeds. The egg market was unsettled and demand was slow.

Corn was in the same notch as a week ago, and barley and feed wheat were unchanged. Oat prices were down 1-1¼¢ on the new crop.

Animal tallow was strong, and up ⅛¢.

Gluten meal was unchanged. Soybean meal and linseed oil meal were up 50¢@$1.

Running time of the formula feed manufacturers held at 36 hours last week, unchanged from the previous period.

Southeast

Cattle and hog feeds continue to be reported as being on the slow side.

Georgia and Florida still have a surplus of milk and dairymen are not pushing their cattle for extra surplus of milk. Several Southeastern feed manufacturers say that for the last three months their dairy feed business has been the slowest in the last 10 years.

Poultry feed manufacturers continue to operate at about normal capacity, however chick replacements continue on the decrease in most of the southeastern states.

The Agricultural Marketing Service reports that dwindling supplies of southeastern hogs caused prices to strengthen last week, however, while on the other hand increased flow of cattle to the southeastern markets caused prices to drop rather substantially.

Broiler prices remain practically unchanged at 17¢ lb. f.o.b. the farm. This continues to give the grower and feed manufacturer a fair profit due to the cost of lower feed ingredients.

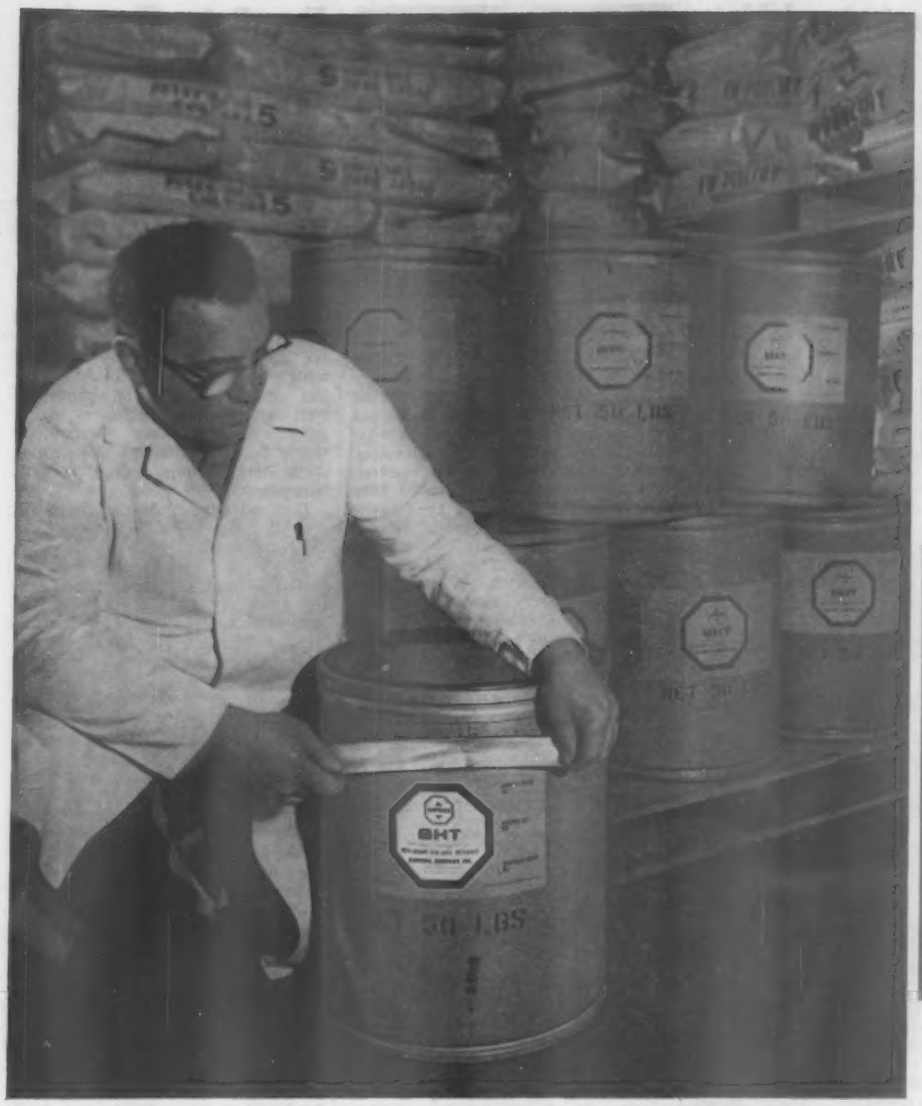
Most major feed ingredient buyers report they are covered on their protein requirements for the month of August, causing oil meals for nearby shipment to remain practically unchanged for the last several weeks. Drouth conditions in the lower Mississppi valley have caused new crop cottonseed hulls to remain firm at $17@18, f.o.b. Mississippi producing mills. However, with the prospects of South Alabama and Georgia cottonseed oil mills planning to begin crushing new crop cottonseed within the next two weeks, there is a tendency toward lower prices. Some cottonseed oil mills sold new crop 41% cottonseed meal at $58 ton sacked f.o.b. for last half August shipment and buyers are not willing to pay this price for September shipment as they feel prices will be lower.

Demand for citrus pulp in Florida continues good with prices remaining firm at $47.50 f.o.b. producing plants, with very few offerings.

Central States

During the week ending Aug. 3, trade in the formula feeds matched

(Turn to MARKETS, page 103)



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USDA Sees 2 Million Cut in Animal Unit Numbers for Both 1959-60 and 1960-61

WASHINGTON — The number of grain-consuming animal units for 1959-60 is now estimated at 2 million less than in 1958-59, with another 2 million decline expected in 1960-61, the U.S. Department of Agriculture reports.

USDA notes that, principally as the result of the fewer hogs to be fed, the number of grain-consuming animal units for 1959-60 is now estimated at 168.4 million, 2 million less than in 1958-59. Present indications lead USDA to believe that a decline to around 166 million will take place in 1960-61.

The 16% reduction in the 1960 spring big crop and the prospective drop of 4% in the fall pig crop will mean fewer hogs on farms during the remainder of 1960 and the early part of 1961. It is estimated that about 65% of the feed consumed by the spring pig crop comes from the current feeding year and about 35% is fed after October 1 in the following feeding season. The fall pig crop will get the bulk of its feed during October-May of 1960-61. This would mean that the feed requirements of hogs will be down considerably from a year earlier in the last half of 1960 and will be moderately lower during the first half of 1961.

More Cattle Fed

USDA notes that with hog production down, more beef cattle are being grain fed for market this year. On April 1, the total number of cattle on feed was 8% above a year earlier and on July 1, 4% above. Cattle feeding is expected to continue heavy during the remainder of the current feeding year and into 1960-61, USDA says. While slightly fewer dairy cows were on farms in early 1960 than a year ago, the rate of feeding per cow has been at a record level—up 5% on June 1 this year over a year earlier.

Over-all poultry production, so far during the 1959-60 feeding year, has been a little below the 1958-59 level and probably will continue below a year earlier during the remainder of the current feeding year and into 1960-61, USDA notes.

Although the number of hens and pullets of laying age was the same as a year earlier on July 1, the number of pullets not of laying age was substantially below a year earlier in the first half of 1960.

The reduction in the number of chicks hatched for flock replacement in the first half of 1960 would indicate the number of layers on farms this winter probably will be down around 7 or 8% below the same period last year. Broiler production, on the other hand, is currently at a higher level than a year ago and is expected to continue a little above last year during the next few months. The number of turkeys raised this year may about equal the high level attained in 1959, USDA says.

Feeds: Average Bulk Prices and Index of Weighted Prices*
(Dollars Per Ton)

	Aug. 2, 1960	July 26, 1960	Change from previous week
OILSEED MEALS			
Prices at prin. mkts.:			
Soybean meal	61.00	60.80	+ .20
Cottonseed meal	61.05	60.60	+ .45
Linseed meal	62.90	61.90	+1.00
Copra cake or meal	67.25	66.25	+1.00
Peanut meal	51.00	53.50	—2.50
Index	79.7	79.3	+ .4
ANIMAL PROTEIN FEEDS			
Prices at prin. mkts.:			
Meat meal	73.50	72.80	+ .70
Tankage	70.40	70.00	+ .40
Fish meal	90.00	90.00	...
Index	66.1	65.7	+ .4
GRAIN HIGH-PROTEIN FEEDS			
Prices at prin. mkts.:			
Gluten feed and meal	42.40	42.40	...
Dist. dried grains	53.60	53.35	+ .25
Brewers dried grains	38.35	37.45	+ .90
Index	68.5	68.3	+ .2
WHEAT MILLFEEDS			
Prices at prin. mkts.:			
Bran	38.80	37.05	+1.75
Midds. and shorts	40.45	40.55	— .10
Index	71.6	70.1	+1.5
OTHER MILLFEEDS			
Prices at prin. mkts.:			
Hominy feed	41.45	40.65	+ .80
Rice bran	29.00	29.00	...
Index	63.4	62.3	+1.1
ALFALFA MEAL			
Prices at prin. mkts.	45.55	45.35	+ .20
Index	87.7	87.3	+0.4
MOLASSES, FEEDING			
Prices at prin. mkts.	22.11	21.00	+1.11
Index	65.8	62.5	+3.3
ALL FEEDSTUFFS			
Index	74.1	73.4	+0.7
FEED GRAINS			
Prices at prin. mkts.:			
Corn	41.10	41.50	— .40
Oats	43.60	44.10	— .50
Barley	39.80	39.40	+ .40
Grain sorghums	36.40	36.90	— .50
Index	65.7	66.3	—0.6

*Base period of index is 1947-49.
Source: USDA.

Merck Adds New Vitamin E Product

RAHWAY, N.J. — "Stabimix" E, a supplemental source of vitamin E, is the second stabilized dry vitamin product added to the Merck & Co., Inc., chemical division line, designed for specific use in poultry and turkey feeds, James E. McCabe, marketing director for agricultural products, has announced.

Last fall, Merck introduced the first product in its Stabimix series of vitamins, Stabimix A, which provides supplemental vitamin A.

The new form of vitamin E is a dry, stabilized feed supplement containing either 20,000 or 50,000 international units of vitamin E per pound. According to Mr. McCabe, Stabimix E has the following advantages:

"Rapid absorption in the GI tract;

"free-flowing in hot or cold weather;

"desirable particle size;

"full stability under humid conditions;

"full stability in feedstuffs;

"full stability under normal pelleting, and

"full stability in mineral mixes."

"In addition," Mr. McCabe said, "'Stabimix' E permits the vitamin it contains to be fully active biologically."

"Stabimix E is stable under normal feed manufacturing conditions, storage and handling," Mr. McCabe said. "Each of the two potencies of 'Stabimix' E will be available in 50-lb. fiber drums with liners."

Stocks of Stabimix E have been supplied for immediate distribution from Merck warehouses in Teterboro, N.J.; St. Louis, Mo.; Atlanta, Ga., and Los Angeles, Cal.

Mill Workers Granted General Pay Increase

LOUISVILLE — Eight hundred Pillsbury Co. employees will get a wage increase as a result of a supplemental wage agreement signed by the Grain Millers Local 33. The workers involved include 350 here and 450 at New Albany, Ind.

The agreement announced by the union provides for general wage increases of 9 to 11½¢ an hour for all employees. In addition, some workers will get adjustments up to 20¢ an hour.

This agreement supplements the master contract decided June 17. The contract provides health and welfare changes, new holiday and severance pay plans as well as pay for jury duty and funeral leave.

PICKING A WINNER — L. Miller Manford, Nixon, Texas, hatchery and feed store owner, was called on to perform a variety of duties in his role as new president of the American Poultry & Hatchery Federation during that group's recent convention in Memphis. (Feedstuffs, July 23.) Here he is in the Feedstuffs-Farm Store Merchandising exhibit ready to pull the winner's name in an FSM drawing. The winner was Robert R. Barrick, North Iowa Hatchery, Osage, Iowa, who was awarded a merchandise display fixture stocked with poultry health products. Part of the fixture and merchandise can be seen in the background. Holding the box is Emmet Hoffman, editor of Farm Store Merchandising, a publication affiliated with Feedstuffs.

Hales & Hunter Names Two Vice Presidents

CHICAGO—Election of Dr. Sylvan Burton Lee as vice president, director of operations, and William W. Walker as vice president, director of consumer products, has been announced by William H. Garvey, Jr., president of Hales & Hunter Co.

Dr. Lee joined the company in December, 1958, following his resignation from Olin Mathieson Chemical Corp. where he was assistant to the president. Dr. Lee received his doctorate from the University of Wisconsin and was also associated with E. R. Squibb & Sons and the Commercial Solvents Corp.

Mr. Walker joined Hales & Hunter in October, 1948, as a salesman and was promoted successively to general traffic manager, assistant sales manager, director of account sales and director of consumer products.

Egg Price Trend Turns Downward

NEW YORK—The price trend was downward at most of the nation's egg markets during the week ended Aug. 3, the U.S. Department of Agriculture reports.

Most of the nation's markets were well supplied during the week. Demand was fair for better quality offerings, but ordinary quality lots encountered some resistance and were difficult to clear in normal channels.

Live prices on broilers and fryers in major producing areas were irregular, ranging ½¢ lower to approximately 1¢ higher, with Georgia leveling off at 16½@17¢. Demand was fair, but highly resistant to higher prices. Supplies were adequate to freely available although live weights were lighter than desired in some instances.

Demand during the past week for frozen ready-to-cook turkeys was relatively light.

The West Coast was the exception in the downward price trend on eggs this week. Reports indicate production was declining and fresh supplies had to be supplemented by the withdrawal of some eggs from storage. Over-all price change was 2@3¢ higher on mediums and smalls, but large held at unchanged levels.

Midwest market prices declined on most grades and sizes. Large sizes ranged 1@3¢ lower, mediums 1½@2¢ lower and other grades and sizes were mostly 1¢ below the same day last week. Prices paid at the farms in Iowa dropped slightly from 25-32¢ the previous week on Grade A large to 25@31¢. Northern Ohio prices paid at the farm for large were off from 41@44¢ to 38@42¢. Chicago delivered price on mixed large was down from 33@34½¢ the previous week to 33@33½¢.

Northeast Markets

Northeastern markets were irregular. New York ranged about 1¢ lower on most grades and sizes. At Philadelphia, large and mediums were mostly 1¢ lower, but smalls ranged 1@2¢ higher. At Boston, the limited offerings of large and medium browns resulted in a 1¢ advance. The limited available supplies of browns have been disturbing to most dealers in the Northeast.

In the Southeast, prices declined as

(Turn to EGG PRICE, page 97)

Meat Meal, Tankage Production Up

WASHINGTON — During the first half of 1960, meat meal and feeding tankage production totaled 807,000 tons, 14% above the production for the first six months of 1959. However, the figure was nearly the same as for the second half of 1959.

Combined production of the two products was well above a year earlier for each of the first six months of the year.

Production of meat meal including poultry by-product meal totaled 642,000 tons during the January-June period. This was over a tenth more than produced during the same period of 1959, but just 1% above production during the last half of last year.

Tankage production during the first half of this year, 165,200 tons, was over a fifth above the comparable period last year, but 6% below the last six months of 1959.

Production data for meat meal and tankage are based on virtually complete returns from producers of these feed materials. Meat meal includes poultry by-product meal but excludes feather meal.

Meat Meal and Digester or Feeding Tankage U.S. Production, by Months, January, 1958-June, 1960

Month	Meat Meal 1958 Tons	Meat Meal 1959 Tons	Meat Meal 1960 Tons	Tankage (digester or feeding)* 1958 Tons	Tankage (digester or feeding)* 1959 Tons	Tankage (digester or feeding)* 1960 Tons
January	97,500	98,400	106,000	22,400	24,900	29,400
February	86,200	92,000	103,400	20,500	23,100	28,000
March	85,800	94,000	114,900	18,900	21,400	29,200
April	87,800	97,200	100,500	18,200	21,700	25,400
May	86,800	97,000	105,300	18,700	22,500	24,600
June	87,900	97,200	111,900	19,000	21,500	26,600
Total	532,000	575,800	642,000	117,700	135,100	165,200
July	94,700	105,000†	.....	20,400	26,900†	.....
August	94,000	101,400†	.....	20,700	27,800†	.....
September	94,800	101,600†	.....	21,900	27,900†	.....
October	104,200	108,200†	.....	22,600	30,500†	.....
November	96,800	104,700†	.....	23,100	30,900†	.....
December	97,600	111,800†	.....	22,700	31,900†	.....
Total	582,100	632,700†	.....	131,400	175,900†	.....
12 months	1,114,100	1,208,500†	.....	249,100	311,000†	.....

*Does not include tankage produced for fertilizer.
†Revised.

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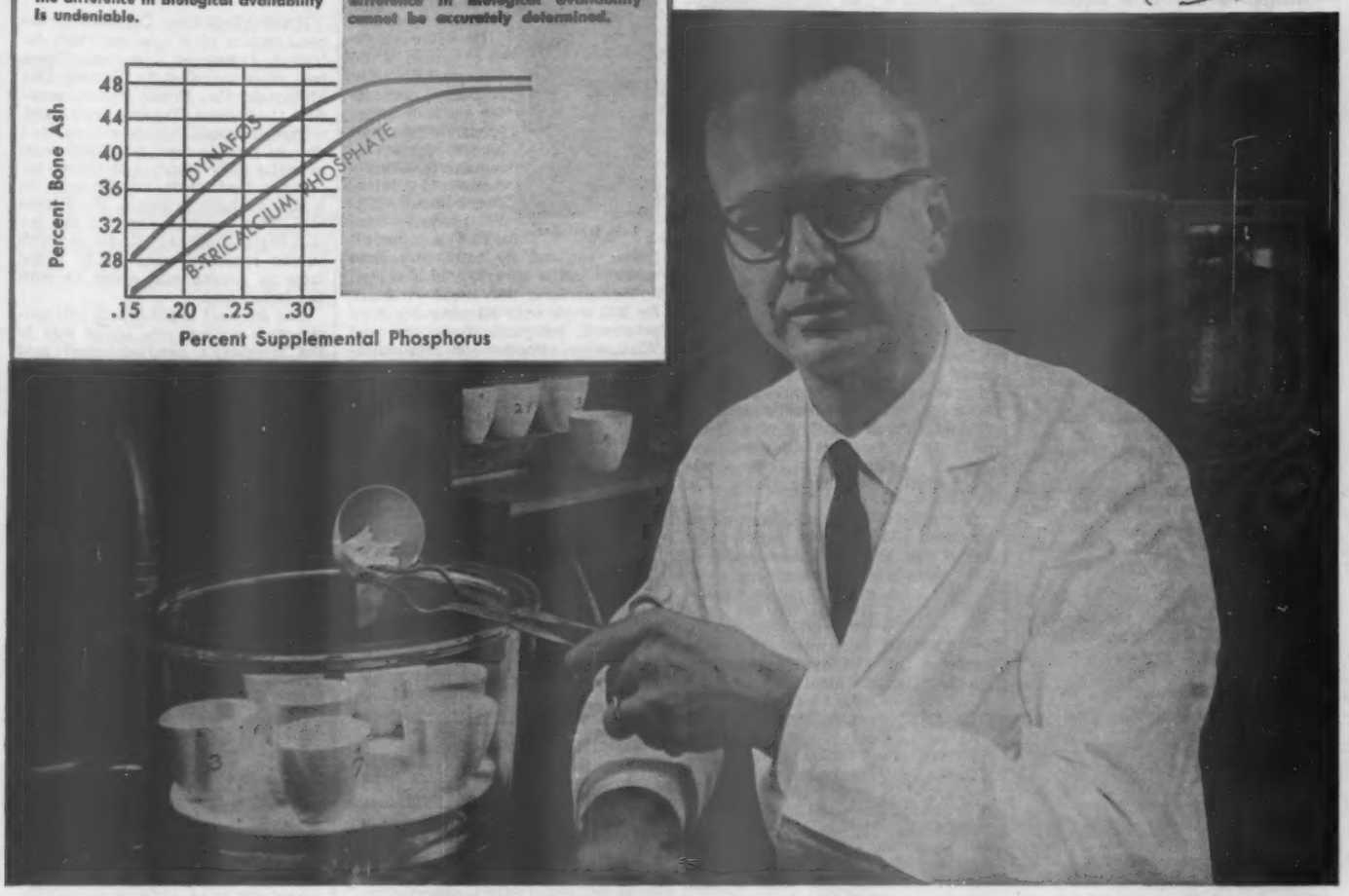

Dr. Herbert Peeler, Director of Animal Nutrition Research at IMC, supervises the "IMC test" of feed phosphate value — the testing technique used to maintain the high biological value of DYNAFOS.

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By-Product Feed Supply Seen About Same Level in 1960-61

WASHINGTON—Total supplies of high-protein feeds and other by-product feeds available for feeding in 1960-61 are expected to about equal the 27 million tons currently estimated for 1959-60, the U.S. Department of Agriculture says.

The supply of oilseed meal available for feeding during the 1959-60 feeding year, which began last October 1, is estimated smaller by USDA than last year, while soybean and cotton acreage is estimated larger in a Feed Situation report.

The supply of oilseed meal for 1959-60 is estimated at 11.5 million tons, 3% smaller than the record tonnage last year. The total quantity available is expected to be as large in 1960-61 as this year.

The 1960 acreage of soybeans, estimated on July 1 at 24.4 million acres, is 5% above last year's acreage. Even with a smaller carryover of soybeans in prospect, the soybean crush could be maintained at the 1959-60 rate, USDA believes.

Cotton acreage is also estimated to be slightly above that of last year. Flaxseed production is estimated at 32 million bushels, up substantially from the 23 million bushels produced in 1959.

Exports of oilseed meal in 1960-61 probably will be below the high level reached in 1959-60. This could leave a little more for domestic feeding, USDA says.

Prices

Prices of high-protein feeds declined 5% from June in the first three weeks of July, when they averaged 15% lower than in July, 1959.

Prices of these feeds in the first half of 1960 followed a pattern similar to that of a year earlier, declining from January to June, averaging 8% lower for the six months.

The sharp decline in fish meal prices during the past year brought prices at Buffalo to the lowest level since World War II. Fish meal prices in early July were 30% below the 1954-58 July average, a greater decline than for any of the other protein feeds.

Prices of tankage and meat meal also have been relatively low this summer, down about 20% from a year ago. Supplies of these feeds are ample and they are important ingredients of hog and poultry feeds, for which demand has been lower this year than last, USDA notes.

The price of soybean meal, 44% protein, at Decatur averaged $51 per ton in early July, $7.50 or about 13% lower than a year earlier. Prices of cottonseed meal and linseed meal were down about 15%. Soybean meal prices have been lower than average, relative to these feeds this summer, although linseed meal prices have dropped sharply from last winter.

Influenced by Supplies

Prices of these feeds in the first half of 1960 have been influenced by ample supplies, especially of soybean meal, a rather sharp drop in exports since last winter and reduced demand for poultry feeds. With ample supplies of soybeans on hand for crushing and prospects generally good for the 1960 crops, protein feed prices probably will continue below the 1959 level this summer and fall.

Feeding of oilseed meal during October-May of the current feeding year is estimated at about 7.9 million tons, 5% below that for the same period of 1958-59. Feeding of soybean meal was down 6% and linseed meal 32%, but reductions in these meals were offset in part by an 8% increase in cottonseed meal.

The 8,764,000 tons of oilseed meals produced during this period was 18,000 tons above the same period of year earlier, but imports were down 100,000 tons, giving a little smaller total supply. Exports for the eight months were up sharply to 652,000 tons, 273,000 tons more than were exported in October-May 1958-59. Stocks of oilseed meal on June 1 totaled 404,000 tons, 66,000 tons above those held a year earlier.

Soybean meal production totaled 6,278,000 tons during October-May 1959-60, 303,000 tons less than a year earlier, while feeding was down 395,000 tons. Exports of soybean meal totaled 480,000 tons compared with 360,000 during October-May 1958-59. Stocks declined from 138,000 tons on June 1 to 116,000 on July 1 when they were 43,000 tons below a year earlier.

Production Up

Cottonseed meal production during October-May was 19% larger than a year earlier and has been the principal factor in maintaining the current level of oilseed meal supplies. Although exports have been heavy and feeding has increased, stocks on hand June 1 were larger than last year.

Feeding of grain byproduct feeds during October-May 1959-60 was heavier than in the same period last year. The quantity of gluten feed consumed was up 11% and distillers' dried grains and brewers' dried grains were both up 4%. However, feeding of fish meal is down to 170,000 tons, 55,000 tons less than a year ago, while alfalfa meal feeding is down slightly.

OPEN HOUSE—A few of the hundreds of persons who attended the open house held at Wirthmore Feeds' newly-completed bulk feed station in Florin, Pa., are shown above. Bulk feed demonstrations were given and Wirthmore field service representatives told of the advantages of using bulk feed. The new installation will provide delivery within a 50-mile radius of Florin.

Good 1960 Alfalfa Crop in Colorado

LAS ANIMAS, COLO. — With favorable weather conditions and sufficient moisture, farmers in this area with alfalfa fields appeared headed for a good 1960 crop, according to Frank Ellenberger, manager of the National Alfalfa Dehydrating & Milling Co. hay mill at Fort Lyon Station.

He said some farmers delivering to the mill now are well into the third cutting. If moisture holds for the rest of the season, the farmers should get six cuttings this year.

Yield so far this summer has averaged about a ton to the acre per cutting and the farmers may get from five to six tons to the acre this season.

The fields are reported to have had some pea aphids but these appear to be decreasing now. Regarding water, irrigation will depend largely on the flow of the Arkansas River during August.

Wirthmore Feeds Creates New Post

WALTHAM, MASS. — Wirthmore Feeds, Inc., has named Lewis E. Whitaker as director of allied merchandising, a newly-created position.

L. E. Whitaker

He will continue as chairman of the company's new products committee and will be responsible for all phases of marketing the feed firm's recently introduced line of "Big-W" products — including antifreeze, rat and fly baits, household aerosols, cattle sprays, wild bird seed and other farm and home products. He will work with all company store personnel, independent dealers and Wirthmore sales-service representatives in developing new merchandising methods.

Mr. Whitaker has been a member of the Wirthmore organization since 1928 and has served as a field representative, district sales manager and division sales manager. Prior to his most recent promotion, he was administrative assistant to R. D. Emmons, general sales manager. In his new capacity he will be assigned to the Wirthmore Stores Department, the company's retail distribution branch.

Texas Exchange Sells 40 Millionth Broiler On First Anniversary

CENTER, TEXAS—The Southwest Poultry Exchange here observed its first anniversary Aug. 3 and during the auction that day, the 40 millionth broiler was offered for sale to the highest bidder.

"The success of this new method of marketing live broilers in Texas has exceeded our fondest expectations," says Frank Sisco, Nacogdoches, president of the exchange. "But it wasn't always that way," he added. The exchange was boycotted at first by a number of buyers, but resistance has dwindled away until it is now negligible, Mr. Sisco said.

"The producers and feed dealers, who were responsible for organizing the exchange, took a financial beating during the first few weeks for selling broilers exclusively through the auction, but their faith and confidence are paying off now," Mr. Sisco said.

Figures tell the story of the auction's growth and its establishment as a representative market for broilers sold in the east Texas area. Only eight buyers showed up at the first day's sale. There are currently 34 authorized buyers, who are active at each auction, which commences at 1:30 p.m. every Monday, Tuesday, Thursday and Friday. Sales generally last about one hour and are broadcast by four radio affiliates of the East Texas Network.

Volume Rises

It required a great deal of preliminary effort for the exchange to list 97,500 chickens for sale that first day a year ago, whereas the average daily volume is now 220,000 birds. Exchange management confidently predicts that the total volume for the next year will exceed 50 million chickens. The average price recorded at the initial sale was 14.4¢ per lb. From Aug. 3 through Dec. 31, 1959, the average price paid was 14.9¢ per lb. However, from Jan. 1 through July 29, 1960, the average price paid under the auction's number one contract has been 17.5¢ per lb.

Lynn Tatum, manager of the exchange, says that one of its major aims has been to establish a price that represents a true market situation in the area. He said, "This was recently accomplished when the reporting service of the U.S. Depart-

(Turn to EXCHANGE, page 102)

Kansas City Firm Gets Contract for Texas Feed Mill

KANSAS CITY — Contract for the construction of a new feed mill for United Industries, Houston, Texas, has been awarded to Kansas City Millwright Co., Frank Betton, president the Kansas City firm, announced.

The new mill, which will be of a size to provide feed for 10,000 head of cattle to be fattened at United Industries feed yards, will be built on a new modular principle, Mr. Betton said. This principle involves the use of a basic standard mill unit to which similar standard units can be added later as needed and which fit with the initial unit.

The contract is the fourth mill construction project now under way in the company's newly-enlarged feed mill division and marks a full-scale entry into the feedlot and feed mill construction industry. The company's regular elevator construction and mill machinery installation services will be continued as in the past.

Kansas City Millwright Co. is now completing construction of a complete dehydrating, mixing and pelleting plant at Melbourne on the east coast of Florida for Deseret Farms of Florida. This plant represents a new approach to the processing of forage crops from tropical grasses. Extensive research into the preparation of edible and economical livestock forage from native Florida grasses will be undertaken at this large pilot plant, which is expected to be the forerunner of a series of mills designed for this purpose.

In addition, Kansas City Millwright is now completing modernization of the Farr Co.'s feed mill at Lucerne, Colorado, and is also engaged in modernizing the feed mill of Deseret Farms of Georgia at Leslie. Previous construction projects completed by the company include the erection of a new mill as an addition to the Dannen Mills feed plant at St. Joseph, Mo., which was completed a short time ago.

Idaho Pellet Mill Nears Completion

ROCKFORD, IDAHO — Eastern Idaho's third complete pelleting mill for hay and grain is nearing completion on a railroad siding here.

Planning of the $225,000 feed processing mill by seven area ranchers and two businessmen reflects the turn to complete crop rotation programs on the thousands of acres of new desert entry farm land opened through deep well irrigation. Hay and grains are raised in abundance with rotation maintaining land fertility.

In addition to a pelleting mill, hammer and steam rolling mills are being installed along with a mollifier, all adapted to bulk loading to the stock feeder, according to Elwin Murdock, director in the corporation formed to back the venture.

One of the area's few 60-ft. scales, capable of weighing truck and semi-combinations, and 90,000-bu. capacity of storage bins for several feed grains are expected to be ready for early arrival of grain this month.

Corporation officers are George Peterson, president; Alma Merrill and Herb Hahn, vice presidents; Dean Williams, secretary-treasurer, and directors: Quentin Murdock, Elwin Murdock, Arnold Dance and J. E. Merrill.

LARGE FIRE LOSS

DAYTON, OHIO — Fire caused an estimated $150,000 to $200,000 damage to the Brookville Farmers Grain Co. main building and three other structures. One fireman was injured in fighting the blaze. Cause of the fire has not been determined.

GTA Buys Honeymead Products' Soybean Processing Plant

ST. PAUL—The Farmers Union Grain Terminal Assn. (GTA) has moved into the soybean processing business with purchase of the Honeymead Products Co. soybean plant at Mankato, Minn. Purchase price was about $6 million, according to M. W. Thatcher, general manager for the grain marketing cooperative.

This plant has been described as the largest single soybean processing facility in the U.S. It has a capacity of 60,000 bushels of soybeans or flaxseed daily.

Honeymead Products Co. in recent years has had a sales volume sometimes exceeding $40 million.

Mr. Thatcher said that the plant will continue to operate under its present managers and that all present personnel will be needed for future operations.

GTA's board of directors had planned for some time to enter the field of soybean and flaxseed processing "as a necessary part of the farmers' marketing program," Mr. Thatcher said. He commented that with the purchase of the plant, soybean and flaxseed producers in the cooperative immediately gain an integrated marketing service and problems of building a new facility are avoided.

GTA, founded in the late 1930's, markets grain for more than 600 country elevators in four states, runs a terminal elevator business with 30 million bushels storage, operates 104 lumber yards, manufactures farm feeds and operates a durum wheat flour mill. It has a reported net worth of about $40 million and serves an estimated 150,000 farmers in Minnesota, North Dakota, South Dakota and Montana. It claims to handle one third of the grain produced in that area.

Both Trade, Bank Credit for Broiler Production Down

ATLANTA, GA.—Both the volume of bank credit outstanding and trade credit outstanding for broiler production at the end of June, 1960, were down from a year ago, according to a continuing survey of the Federal Reserve Bank of Atlanta.

Volume of bank credit outstanding at the end of June was down sharply from the total a year earlier, but outstandings declined only slightly from the level in May, 1960.

Bankers reduced their volume of new loans from both month-ago and year-ago levels. They curtailed their new loans direct to producers more than those to dealers, the Atlanta bank reports.

Repayments by both classes of borrowers, however, also declined. As June ended, the outstandings of loans direct to producers were down slightly from totals at the beginning of the month; outstandings of loans to dealers, however, remained unchanged.

Trade credit outstanding at selected feed manufacturing plants reporting their accounts was less than outstandings both a month earlier and a year earlier.

Meanwhile, broiler placements in five district states declined slightly from May to June this year. Placements in June, however, were sharply above those a year earlier.

MOORMAN OFFICIAL DIES

QUINCY, ILL.—Claude Holmes, 61, vice president in charge of financial administration of the Moorman Mfg. Co., died recently. He joined Moorman's in 1923 as a clerk in the accounting department and had been a member of the board of directors since 1942.

Environment Key In 'Egg Factory'

DENVER—An air conditioned hen house where all hens receive the same light, feed and water is one of the environmental control features of an electronic egg factory being tested by Cyclo Manufacturing Co. here.

Jim Helbig, Cyclo vice president who designed and patented the process, describes the facility as a "giant merry-go-round 60 ft. in diameter." There are six rows of caged hens, seven cages high, which circle the round house each hour. Feed and water troughs are stationary and each hen has two minutes per hour to eat and drink.

He says the object is to produce eggs cheaper through environmental control and automation.

(The "merry-go-round" egg factory was initially described in the June 4 issue of Feedstuffs.)

Environmental control also includes light. Hens spend about two thirds of their time in a "twilight area" which is conducive to rest and longer hen life. At night the slowly moving merry-go-round is turned off for 10 hours.

Mr. Helbig said that detailed records are kept on each hen. Unprofitable hens are sold.

Lewis Hayden, president of Cyclo, says that the system may revolutionize egg production. "With the odorless, almost noiseless system it will be possible to produce eggs in the heart of the city and no one will know the chickens are there," he commented. That would cut shipping and handling costs in bringing eggs in from as far as 1,000 miles away, Mr. Hayden stated.

Turning to the financial aspects, Mr. Helbig said that such a project is an investment. He added that it is possible to build a merry-go-round unit for the same price as good conventional units but it's still going to cost $5@6 per hen.

The company has already invested $100,000 developing the system and the system has enough promise that several prominent Coloradans have backed the venture financially. Among those financing the project is Dan Thornton, former governor.

Futures on Oilseed Meal Move Higher

MEMPHIS, TENN.—Oilseed meal futures contracts moved higher on the Memphis Board of Trade the past week, reflecting stronger demand for soybeans. The soybean lift resulted from weather news.

One broker said a very bearish factor hanging over the soybean oil meal market is that there are 391 registered certificated contracts on the Chicago market. The general opinion of the trade, he said, is that there will soon be some form of liquidation before entering the new crop.

Cottonseed oil meal activity on the board developed in new crop positions at $50.50, revealing trading interest at the $50@51 price range of the past two weeks.

The Memphis market was boosted by a strong soybean situation, particularly new crop. This was brought on by some reports of adverse weather over the soybean belt, where moisture is needed to assure a fair yield for bean crop production.

Mixed feed business was said to be fair throughout the country, with no upturn seen in the near future.

Also termed fair was business in cash soybean oil meal and cottonseed oil meal.

Unrestricted soybean oil meal closed 50¢@$1.90 ton higher than a week earlier and bulk solvent cottonseed oil meal unchanged to $1 higher.

Trading volume totaled 1,600 tons of unrestricted soybean oil meal and 300 tons of bulk solvent cottonseed oil meal.

Swift & Co. Names Feed Mill Manager

CHICAGO—Construction of Swift & Co.'s feed mill at Mendota, Ill., is underway, and announcement has been made that Scott M. Lorimor will be manager of the mill. At present, he is manager of Swift's feed mill at Forest Park, Ill.

S. M. Lorimor

The Mendota mill is expected to be completed by the end of this year. With capacity of 12 tons an hour, the plant will manufacture a full line of formula feeds to serve dealers in Illinois, Wisconsin, Indiana and Michigan.

Mr. Lorimor has been with Swift since 1938, starting his career at the Sioux City, Iowa, meat plant standards department. Subsequently, he served as assistant manager of by-products departments at Sioux City and National Stock Yards, Ill. In 1951, he went to Chicago for sales training and later served as head of the Chicago plant feed department and as feed sales manager.

He has been manager of the Forest Park feed mill since 1956.

Mr. Lorimor was born in Shenandoah, Iowa, and is a graduate of Iowa State University, at Ames, with a major in animal husbandry.

USDA Plans to Buy Frozen Beef, Lamb

WASHINGTON—The U.S. Department of Agriculture has announced plans to buy frozen ground beef and frozen ground lamb for schools participating in the National School Lunch Program.

Lamb purchase will again be on an experimental basis.

Purchase will be made with funds transferred by Congress from Section 32 for use under the National School Lunch Act and amounts will be determined by quantities and prices offered.

Both meat products will be purchased only from vendors operating under federal inspection in order that the products purchased may be shipped in interstate commerce. The products must be prepared from domestically slaughtered and processed beef and lamb.

Hall County Tops Georgia in Broilers

ATHENS, GA.—Hall County was first in production of broilers in Georgia in 1959, the Georgia Crop Reporting Service showed by figures recently produced.

The broiler production in Hall County came to 26,200,000, followed by Cherokee County, which produced 24,750,000. In other years, Cherokee County has been the largest broiler producing county in the state.

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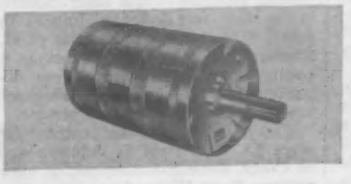

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ICC Changes Site Of Hearing on Rail Abandonment Plan

HARRISON, ARK.—The Interstate Commerce Commission announced this week it will hold its hearing on a request for abandonment of the 71-mile Arkansas and Ozarks Railway here instead of at Little Rock as previously announced.

The hearing was set for Aug. 25.

Officials said the hearing will be held in the federal courtroom here.

No reason was given for the change, although many shippers who are protesting the abandonment had expressed regret the hearing was not going to be held in this North Arkansas area.

The line—considered by many to be vital to the Boone and Carroll county poultry producing industry—has been out of operation since a flash flood damaged its system May 5.

It was a prime mover of bulk feed for the 100,000 turkeys and 300 000 broilers on feed in the Berryville-Green Forest-Harrison area. Since then feed has been moving in by truck. But dealers say that the rates are higher, forcing them into a bad competitive siutation with their finished birds.

Feed men and other shippers hope the railroad's petition for abandonment will be denied and that the line will be forced to resume operation. They filed suit in an attempt to force the road to resume service, but a federal court judge turned down the request. He told the group it was out of his jurisdiction.

Although the line's owners contend they have lost more than $205,000 in the last five years, the Arkansas Commerce Commission has sought to intervene in the case. Arkansas officials joined in the protest against abandonment.

Iowa State Man Gets $1,000 Pfizer Award

DAVIS, CAL.—Leonard Z. Eggleton, extension poultry specialist, Iowa State University, recently was named winner of the 1960 Pfizer Extension Teaching Award. Mr. Eggleton received his $1,000 award at the closing banquet of the Poultry Science Assn. convention Aug. 2-4 at the University of California.

He was the third recipient of the Extension Teaching Award, established in 1958 by Chas. Pfizer & Co., Inc., in cooperation with the Poultry Science Assn. Dr. William Sherman, Pfizer nutritionist from the company's Agricultural Research and Development Center, Terre Haute, Ind., made the presentation.

Since Mr. Eggleton joined the Iowa State faculty in 1948, he has served as chairman of the state poultry extension staff. Three men now assist him with Iowa's extension poultry program.

He is recognized for his efforts in organizing a series of extension teaching programs which have had a positive influence on the production and marketing of eggs in Iowa. His guidance and assistance with the junior program in the country and state have resulted in many poultry demonstrations by 4-H members. One of the presentations dealing with egg quality received one of the honored "Spot Light" positions at the National Fact Finding Conference, an honor never before awarded junior members.

Mr. Eggleton has been quite successful in setting up county organizations to show poultrymen what could be done on a program of good breeding, adequate housing, good feed and quality eggs.

Previous winners of the Pfizer Extension Award were Arthur Gannon of the University of Georgia (1958) and Cliffton F. Parrish of the University of North Carolina (1959).

PROCESS

(Continued from page 1)

testing has turned out a poultry feed looking like a king-size, ready-to-eat breakfast food, simply involves grinding soybeans and grains and running them through an expander, Howard C. Hoyt, the engineer, says.

So far, Mr. Hoyt's experiments have not gone beyond the engineering phase. He said a full-scale project, in which nutritionists will be called upon for consultation, is being planned to find out just how efficient the feed is—and to determine how the cost of production using the new method compares with conventional milling.

Mr. Hoyt says he has been feeding the expanded feed, which has sometimes been made from grains as well as soybeans, to batteries of broilers since January. "Results have been so encouraging," he says, "that the next step will be to make this feed in quantity and run some tests in the field."

He adds that it might be possible that a balanced ration with additives, such as antibiotics, would produce a "cereal-type" feed outyielding present feeds. In his experiments so far, Mr. Hoyt has not used balanced rations nor has he included any additives. However, he says, "It looks as though all of the ingredients, perhaps even antibiotics and medicants, can be sent through the expander at one time."

Mr. Hoyt's discovery was the result of first setting out to find a method for cooking soybeans, a necessary process because cooking destroys certain enzymes which interfere with broiler digestion.

"Soybeans make up a high percentage of the broiler ration in the form of soybean oil meal," Mr. Hoyt comments. "To bring up the fat level in feed, commercial mills add animal or vegetable fat.

"However, soybeans have high oil content. Why extract the oil from beans if this oil will satisfy the fat needs of poultry?"

He adds that crushed soybeans can provide both protein and fat needs, but utilization of this capability has been held up because a satisfactory method of cooking had not been found.

Mr. Hoyt visited several companies which manufacture various cooking devices. In Ohio he found a manufacturer of a cooker which uses the expanded process—and he has been using one of these cookers in the firm's plant for his experiments. A cooker of this type is scheduled to be installed in a laboratory on the University of Delaware campus, Mr. Hoyt said.

Mr. Hoyt provided this outline of how the expanding process works:

Crushed soybeans enter an auger conveyor, and as the material passes along the conveyor it undergoes great pressure created by a "worm" gear.

As the compressed ground beans are squeezed through the opening at the end of the conveyor they expand when they hit the air. Intense heat is generated when the crushed beans are forced through the worm. Temperature is controlled by a steam jacket around the walls of the conveyor.

"Only 30 seconds are required for the beans to pass through the expander," Mr. Hoyt explains. "A temperature of about 210° seems to be about right."

Mr. Hoyt believes the expanding method of soybean processing will prove to be cheaper than present methods "which require large plants and several processing steps."

Describing current soybean processing, Mr. Hoyt said beans must be dehulled, ground and flaked into small, thin particles. A chemical solvent is then mixed with the soybeans removing the oil from the flaked beans.

The solvent is separated from the meal by steam heat which also cooks the meal, destroying the undesirable enzymes.

"In the expanding process," he says, "the beans are merely ground and run through the expander."

Mr. Hoyt believes, too, that use of the expanding process could mean a savings in feed transportation costs in Delmarva. "Approximately enough beans are grown in Delmarva today to take care of its poultry feed requirements. But there is only one soybean processing mill here on the peninsula. All other beans are shipped out either to be processed or exported. Soybean oil meal has to be shipped here from Norfolk or midwestern plants."

It is Mr. Hoyt's opinion that, because the expanded material comes out of the cooker in a form looking like a rope, a revolving blade could be used to chop off short sections into pellets or wafers.

He visualizes a small mill, and this plant's equipment would grind and mix soybeans, corn and other ingredients and send them through the expander and a chopper.

"It will take about another year to complete enough tests to get the feed in commercial use," he said.

New Mississippi Poultry Operation Includes Feed Service, Hatchery

HATTIESBURG, MISS.—Forrest Farms Poultry Plant, Hattiesburg's newest and one of the most modern in the state, was dedicated July 26. In addition to its new processing plant, Forrest Farms' operations include a poultry growing division of four departments—hatchery, hen production, broiler production and feed service.

Participating in the ceremonies were Lt. Gov. Paul B. Johnson and Si Corly, state commissioner of agriculture. Hugh White, former governor and father of the aid act under which the plant was constructed, inspected the plant. W. W. Wright, Jackson, president of the Merchants Co. of which Forrest Farms is a division, was master of ceremonies.

3,500 Chickens Hourly

Forrest Farms processes 3,500 chickens hourly. It takes 75 minutes for a bird to make the complete journey through the plant from coop to crate. Gordon Hicks, plant manager, said each bird is examined by U.S. Department of Agriculture inspectors and that in an average day's production up to 30 of every 1,000 birds may be rejected and condemned to the inedible rendering plant.

The poultry growing division extends over a large portion of southeast Mississippi and now includes about 75 growers on different farms. As operation expands, an increase in growers is anticipated.

The hatchery, located near the processing plant, can produce about 90,000 baby chicks a week at present and at full capacity will be able to produce 250,000 a week.

The broiler department has approximately 600,000 broiler capacity. In the near future this department expects to have one million birds on feed at all times. This would give a weekly production of about 250,000 per week.

Quality Controls

In the egg production department, Forrest Farms at present has about 65,000 hens and pullets in the field. At the farms, eggs are gathered four times a day, stored in coolers and then picked up twice a week and carried to the hatchery.

The feed service department, located near the hatchery and processing plant, includes facilities for storing and delivering feed. All feed used by Forrest Farms growing division is made by Valley Mills in Vicksburg, another division of the Merchants Co.

Steady to Weak Trends Dominant in Farm Commodity Prices

LAFAYETTE, IND. — Steady to weak trends dominated the farm commodity price situation during the last half of July as a result of continued heavy cattle marketing and progress of the small grain harvest which is now virtually completed. An exception to this was soybean trading which showed considerable strength primarily as a result of recent government supply estimates.

Jack Armstrong, Purdue University economist, said although hog prices continued their relatively strong position and showed some indication of further improvement during the third week in July, later losses left month ending prices relatively unchanged at about the $18.50 levels. Hog prices seem to be having trouble crashing through the $19 barrier even with continued relatively light marketings.

In cattle markets, continued heavy market receipts further depressed prices of better grades of fed cattle. Heavy cattle above 1,100 lb. were still being discriminated against as indicated by losses of $1@2 during the two-week period. Continued topping out of feed lots before cattle reach objectionable weights would seem to be a good practice.

In grain trading, soybeans showed the greatest advance during the two week period with increases in some instances of as much as 4¢ bu. This was primarily as a result of a government report which showed stocks of soybeans in the U.S. on July 1 about 21.5 million bushels under a year ago. This led traders to believe that stocks of soybeans on Sept. 30 would be below previous trade estimates. This was further evident as the price of soybean meal advanced $2 ton during the period.

Feed grain trading generally held steady during the period, with good growing and harvesting conditions reported throughout most of the Midwest.

Early period winter wheat losses in trading were generally recovered as wheat harvest was essentially completed and finished on a steady market. Corn prices were mostly steady with no outstanding feature during the period. Government price supports and surplus release policies continue as the dominant factors in the grain markets.

Output of Dry Skim Milk Increases 15%

WASHINGTON — Output of dry skim milk for animal feed increased 15% in June, 1960, compared with June, 1959, the U.S. Department of Agriculture reports.

The production totaled 2.2 million lb. which also was 5% more than the average for the month. The 9.8 million lb. output in 1960 through June was 11% larger than that of the first half of 1959. However, movement of dry skim milk for animal feed dropped 8% from June, 1959.

Correction

TOPEKA, KANSAS — Elevator Erectors, Inc., Enterprise, Kansas, has been granted a charter for erecting and servicing passenger and freight elevators. John Ehrsam has been named resident agent. Capitalization of $50,000 was authorized.

(A similar news item, which appeared on page 49 of the July 23 issue of Feedstuffs, was misleading in that it did not make clear that the charter was for the erection and service of **passenger** and **freight** elevators.)

GRAIN BROKER DIES

MILWAUKEE—James F. Howard, 86, at one time a grain broker in Chicago and later here, died Aug. 1 after a month's illness.

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CHICKENS	12	6	8	4	8	8	14
TURKEYS	12	8	12	—	—	8	10
	PRE-STARTER	STARTER	GROWER	FINISHER	PRE-GESTATION	FARROWING	LACTATION
SWINE	40	40	20	10	20	20	20

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Agricultural Outlook Given, Management Stressed at Missouri Grain Conference

COLUMBIA, MO.—The agricultural outlook, all the way from this fall into 1970, was given and the importance of competent management was stressed at the first annual Grain Handlers Business Conference recently at the University of Missouri.

The theme of the short course was "Improved Management in a Changing Economy." The course was sponsored by the University of Missouri College of Agriculture and the Missouri Grain & Feed Assn.

Summaries of some of the talks on the program follow:

THE ECONOMIC OUTLOOK—Structural changes in the economy to 1970 were listed by Dr. Robert W. Paterson, professor of business and director, Bureau of Business and Economic Research.

Dr. Paterson said:

"Firstly, we will continue to shift from an agricultural to an industrial society.

"Secondly, we are beginning to manufacture technology and there will be a rapid expansion in research and development.

"Thirdly, manufacturing and corporate enterprise generally will become larger and will assume an increasing interest in distribution.

"Fourthly, problems of management and business and government agencies will became increasingly complex.

"Last, but not least, the growing need for education will require superior education, executive competence and knowledge to produce efficient service."

On the outlook to the end of 1960, Dr. Paterson noted the lowering of the Federal Reserve discount rate from 4 to 3½%.

"The effect will be to make money easier to borrow and will provide a shot-in-the-arm to economic activity," he said. "We had been operating at a very high level of income and product prior to the reduction, but we will soon see a resurgence in the boom that will approximate that of 1955-56."

Capital expansion plans of business firms will pick up as will consumer expenditures for durables and housing, he said.

"Right now, it appears that the timing of the Federal Reserve discount rate reduction will spur activity to a level that will be difficult to maintain," he said.

A realized net income from agriculture of $10.6 billion is foreseen for 1960 as compared with $11.8 billion in 1959. Agricultural employment is seen as 5.2 million people for 1960 as against 5.8 million in 1959.

MANAGEMENT PROBLEMS IN THE GRAIN ELEVATOR AND GRAIN HANDLING INDUSTRY—The need for sufficient competent management personnel is "probably the most limiting factor in the process of growth and expansion of business enterprises in the U.S.," according to J. M. Ragsdale, extension professor of agricultural economics at Missouri.

Mr. Ragsdale pointed up as the five basic functions of management, planning, organizing, directing, coordinating and controlling.

"How well you perform the job of managing depends upon how well you perform these functions," he said.

On planning, he said: "The firm which does not recognize planning as an important management function ignores the fact that business is constantly facing choices between alternative courses of action. Business conditions are so dynamic that decisions cannot be left to chance nor be based upon inadequate information gathered at the time of crisis."

He noted that operating people use technology, but management makes the decisions.

"Mediocrity is doomed—you have to do better than average," he said.

Business firms are worrying more about where to find men than where to find money, he noted. Our economy is better suited to supply machines than men.

"Most of the grain and feed men I've been around in the past 11 years could well spend more time sitting behind a desk—planning, organizing, directing, coordinating and controlling," he said. "Performing more of the duties of management and doing fewer of the details of operating the business."

THE AGRICULTURAL OUTLOOK—A brighter outlook for agriculture than appeared likely last fall was seen by Tom Brown, extension economist at Missouri.

"Prices during the rest of 1960 will probably average the same or even somewhat better than they did in the same period of 1959," said Mr. Brown.

He noted the record supply of feed grain and also the record rate of disappearance (157 million tons). He said the heavy use will not reduce the total carry-over. The expected carry-over will be 77 million tons or 9 million more than last year, he said. Corn and grain sorghum have increased while barley and oats have declined.

Protein Feed Demand

"Domestic demand for protein feeds in the first half of 1959-60 has been weaker than a year earlier, reflecting lower poultry production and lower livestock prices," he said. "Protein feed prices averaged 6% lower during October-March this year than last."

Supplies will be adequate for the

(Turn to page 14)

NEW TYPE CONVENTION—Planners of a new type convention for the California Hay, Grain & Feed Dealers Assn. in San Francisco next April included the committee members shown above. They are: J. L. Scott, Taylor-Walcott Co.; Jed W. Burns, Jed W. Burns Co.; J. W. Fielder, Dixon Drier Co.; Winslow W. Hall, general convention chairman, Pacific Molasses Co.; Leo L. Johnson, secretary of the association; Dick Smith, Anderson-Smith Milling Co.; S. E. Lanier, Van Waters & Rogers, Inc.; and Allen Christenson, General Mills, Inc. All are from San Francisco except Mr. Fielder and Mr. Johnson, who are from Dixon and Sacramento respectively. Committeemen not present for the photo were Harry Wagner, Wilbur Ellis Co.; James C. Taylor, Pacific Vegetable Oil Co.; and Thomas C. McNally, Jr., Outsen Bros. Milling Co., all of San Francisco.

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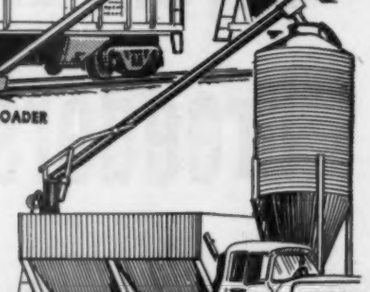

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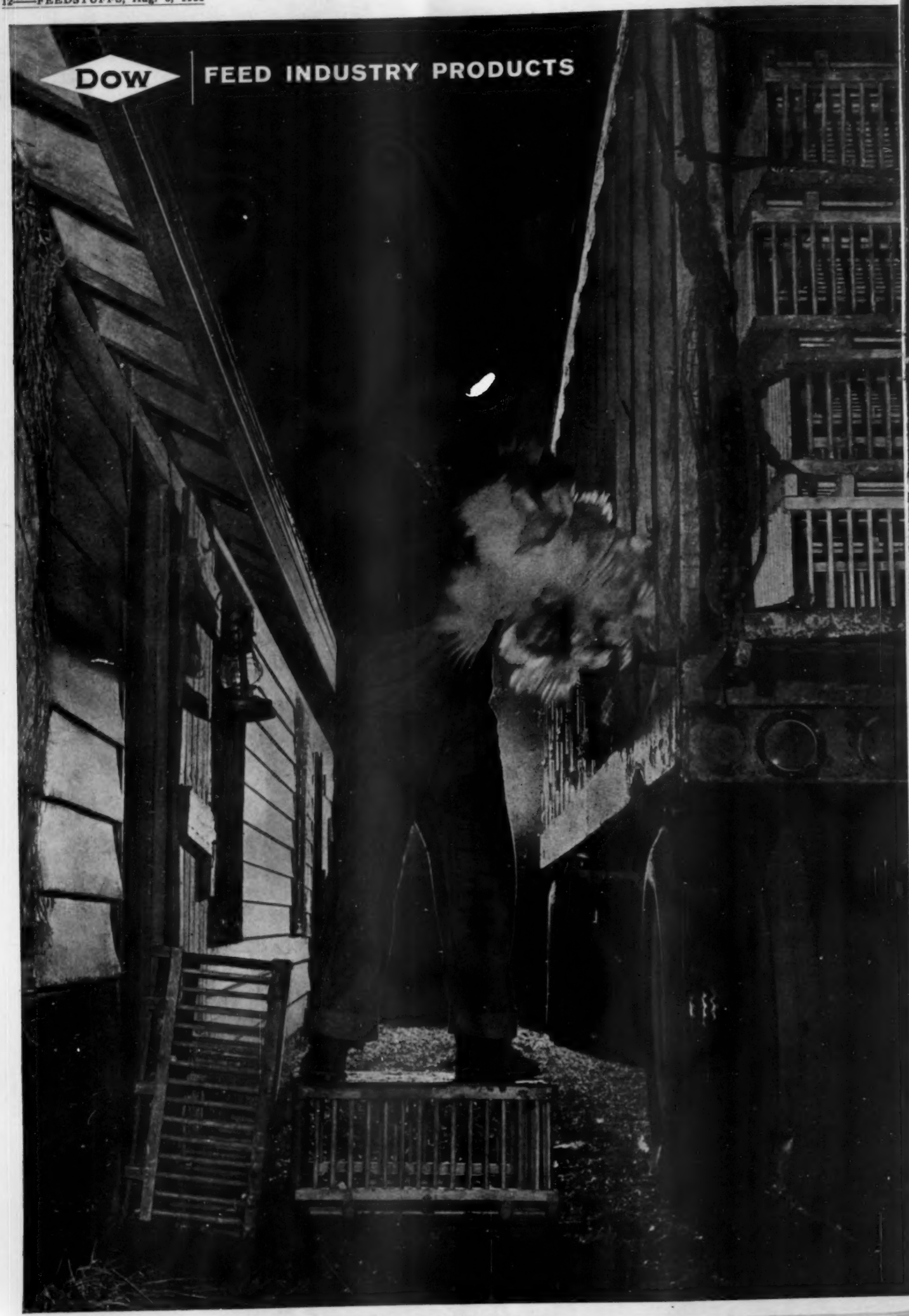
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NUMBER OF TESTS IN WHICH	Zoalene Superior for Weight Gains	28	14	16	14	5	6	83
	Other Coccidiostat Superior for Weight Gains	1	1	0	8	0	0	10
	No Difference in Weight Gains	0	0	0	1	0	0	1
	Zoalene Superior for Feed Conversion	26	10	14	15	2	6	73
	Other Coccidiostat Superior for Feed Conversion	1	2	2	7	2	0	14
	No Difference in Feed Conversion	2	3	0	1	1	0	7

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Feed for Thought

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Look for "Feed for Thought" every month. This popular column appears regularly in this same place (page 14) in the first Feedstuffs issue of each month.

Peter Hand

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remainder of this year, he said. Prices of soybean meal should remain near present level. Animal protein feed prices will likely increase during the latter part of the year.

Hog Outlook

He pointed out that the hog outlook has improved a great deal since the first of the year.

Hog slaughter during the fall will increase rather sharply, Mr. Brown said. Price declines from the summer peak, he added, will probably be greater than the $3 drop of last fall. Even so, fall prices will average substantially higher than last fall.

"The hog situation looks favorable for 1960 and 1961," he said. "There is evidence that hog cycles are getting shorter."

Slaughter of cattle will continue above last year through 1960, Mr. Brown said, but production will continue to exceed slaughter. Numbers are likely to increase again this year, though probably at a slower rate than last year's 4.9 million head.

Mr. Brown notes a "considerably brighter" outlook for egg prices than last year when they dipped to lowest levels since the early 1940's.

By mid-April prices were 27% above a year earlier, he pointed out. Prices will probably stay above last year's levels by about this percentage throughout 1960, he said.

"Increased broiler prices during the first four months of this year have stimulated the hatching of broiler chicks," Mr. Brown said. In mid-April egg setting climbed above last year and has been increasing more each week. The mid-April price of 17.7¢ will not likely continue even with seasonal increased demand, he said.

Turkey Crop

Mr. Brown expressed doubt that a turkey crop as large as intended early in 1960 would occur. Poult hatchings in the first quarter were 29% above last year, but dipped below 1959 as the main hatching season got underway. Farmers' intentions to raise 6% more than last year probably will not be realized, he said. However, a larger portion of this year's birds are heavy breed, so the tonnage produced could be 5% above 1959.

Milk production has been running 1% above last year, he noted. This reflects a slowdown in culling of dairy cows and the continued rise in production per cow. Continued good pastures could bring about a much larger output this year, he said.

Wisconsin Planning New High Grade Egg

MADISON, WIS.—A new grade of eggs to be designated as "Wisconsin Fresh Fancy" is being produced in Wisconsin under supervision of the State Department of Agriculture and may be on the market soon, the department reports.

The new grade will be above grade A requirements, the department said, and is produced and marketed under controlled production conditions and under state inspection. Only eggs produced, handled and marketed in accordance with the strict requirements can be labeled "Wisconsin Fresh Fancy."

Requirements

The requirements call for the eggs to have a high degree of albumen or whites. A "break out" test on 5 to 10 eggs is made every week at the poultry farm and the eggs must average 72 Haugh units for four weeks. (A Haugh unit is a unit of measurement showing the relationship of the weight of the egg to the albumen height. The fresher the egg, the higher the albumen.) If more than one egg in a sampling of 10 is below 55 Haugh units, the flock is disqualified. Complete grading records must be kept by the producer.

Flocks must be confined in clean, dry, well ventilated houses, and must be fed a balanced, all mash ration that will produce a uniform yolk color.

The eggs must be gathered at least three times a day and immediately cooled, free from odors, at temperatures between 50 and 60° and a relative humidity of 70-80%. They must be packed at a temperature not more than 60°, with the small end down and in containers precooled to 60° or less, the requirements state.

The eggs will be marketed with a red and white seal on the carton, bearing an outline of the state of Wisconsin and the legend "Wisconsin Fresh Fancy."

Nutrena Feeds Adds Two Warehouses, Bulk Station in Midwest

MINNEAPOLIS—A major expansion of bulk and sacked feed handling facilities in Illinois and Indiana has been announced here by Nutrena Feeds, livestock and poultry feed division of Cargill, Inc.

Leases to the properties—a 3,000-ton capacity bulk holding station in Jasper, Ind., and sacked feed warehouses in Evansville, Ind., and Riverdale, Ill.—were acquired from the A. E. Staley Mfg. Co. whose feed operation was bought recently by Nutrena.

W. C. Johnson, Nutrena warehouse supervisor here, said the three facilities will be served by truck and rail from the firm's Peoria and East St. Louis mills and will service dealers in parts of Illinois, Indiana, Kentucky, Michigan and Wisconsin.

The Jasper plant, put into operation by Staley in March of this year, includes 10 300-ton storage tanks and a 34-ft. platform truck scale. Leo Hoffman, Staley supervisor in Jasper, has joined Nutrena and will continue as station manager.

The Evansville warehouse, a 134-ft. building owned by the Illinois Central Railroad Co. and formerly leased to Staley, will be used exclusively for sacked feed, Mr. Johnson said. Clinton Koring, Staley manager there, has joined Nutrena as head of the operation.

The Riverdale facility occupies a 225 by 60 ft. portion of a Staley building and will be managed by John Tobinski, transferred from Cargill's Chicago terminal elevator staff.

The additions bring to 30 the number of cities in which Nutrena mills and warehouses are located, Mr. Johnson said.

UTAH HEAT WAVE KILLS 4,000 TURKEYS

★

MANTI, UTAH — A sizzling, record-breaking summer heat wave was blamed for the death of 4,000 turkeys here by Dennis Funk, Sanpete County agricultural agent.

In 14 days, the state has seen temperatures go over the 100 mark 13 times. The high has never been below 95° for more than 30 days, with only traces of rain recorded throughout the state.

Mr. Funk estimated value of the dead turkeys at about $15,000. He said their weights averaged 12-20 lb.

In one instance, the Manti Fire Department sprayed a flock with water in an attempt to cool off the birds, but apparently the move failed to be of any value.

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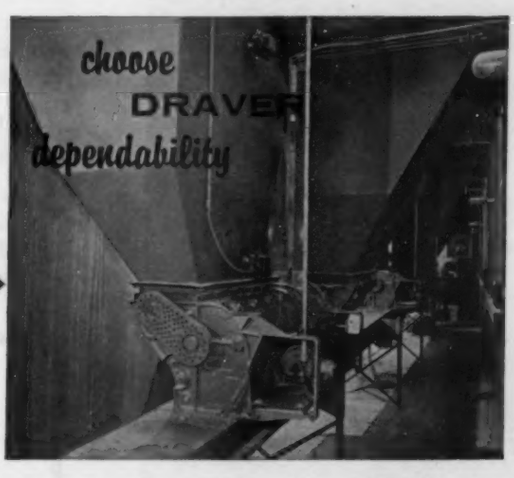

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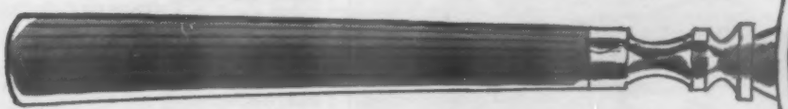

You benefit three ways. One, you eliminate burst-bag waste, because CLUPAK extensible paper absorbs shock stretches instead of tearing. Two, you increase storage efficiency. CLUPAK extensible paper permits safe, clean, more compact stacking, less re-stacking. Third, you simplify on-the-job handling. Your workmen do not have to "baby" multiwalls made with CLUPAK extensible paper. The next time you order, say, "CLUPAK"... before you say paper.

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1961 Beef Cattle Outlook Brightens With Report of Small Calf Increase

URBANA, ILL.—The beef cattle outlook for 1961 has brightened considerably—the 1960 calf crop is reported to be only 1 to 1½% larger than that of 1959, says Prof. L. H. Simerl, University of Illinois ag economist. This year's calves will provide much of the beef for next year.

The reported increase in the size of the calf crop is less than the growth in population, which is about 1⅓% a year.

(Feedstuffs, in its July 30 issue, reported an anticipated 1% increase in calf numbers.)

"The calf crop figure may be slightly in error, perhaps by ⅓% or so," Prof. Simerl commented. "But we are probably safe in assuming that the calf crop has not increased significantly more than population."

The total 1960 calf crop is officially estimated at 41,646,000 head. Bigger calf crops were recorded in 1954, 1955 and 1956. The calf crop this year is only 6% larger than the 10-year average, 1949-1958. From the same base, population has increased about 12%, or twice as much as the calf crop.

Calf Slaughter

Not all of the calves born this year will live to make beef. Commercial calf slaughter in the first half of this year appears to have been about 2% over the 4,745,000 head recorded for a year before. This suggests that the proportion of calves kept for feeding will be no greater than it was last year.

In actual numbers, the increase in calves born from last year to this amounts to 600,000 head. About half of this increase was in Texas and Oklahoma. Smaller increases were reported from New Mexico, Arizona and Colorado. No significant increases were reported for any other sections of the country.

Experts had expected a greater increase in the calf crop than has been reported. According to government reports, farmers and ranchers had 3% more cows at the beginning of this year than they had in 1959. Numbers of heifers were up 6%. But the slaughter of cows has been running 6 to 7% greater this year and the slaughter of heifers has increased 12%.

Imports of cattle are not so great this year as they were in 1959 when high prices attracted nearly 700,000 head from Canada and Mexico. During the first five months of this year, imports totaled only 352,000 head or 6% less than in the comparable period of 1959.

Trends so far this year indicate that cattle numbers, which increased 5% in 1959, may increase only about 3% this year. Such an increase would be only about 1% more than enough to match population growth.

The report of cattle on feed July 1 was also encouraging. It showed that farmers in 21 leading states were feeding only 4% more cattle this year than the year before. Most of this small increase was in the western states. Farmers in the 13 north-central or corn belt states had only 1% more cattle on feed July 1 than they had one year earlier.

Another encouraging point is that for the next six months beef will meet relatively little competition from pork in the nation's food stores, the Illinois agricultural economist said.

Ralston Purina Co. Reports Earnings

ST. LOUIS—Lower third quarter earnings are reflected in the nine month statement of earnings issued by Ralston Purina Co. here. Net sales for the company during the nine-month period ended June 30 totaled $382,902,028 as compared with $401,761,451 in 1959.

Donald Danforth, chairman of the board, said that lower April sales were responsible for the "disappointing" third quarter. However, he said that May showed improvement and June was still better with earnings 7¢ a share above those for 1959. Good earnings were predicted for the final quarter of the year.

Net earnings of the firm after taxes also suffered in the nine month period. The earnings figure was down $1,863,016 from $14,944,588 in 1959 to $13,081,572 for the nine month period just completed.

Earnings for the current 6,050,583 shares of stock outstanding total $2.01 as compared with $2.30 for 6,485,911 shares at the same time last year. Third period earnings totaled 57¢ per share.

International operations of the company, whose figures are not in the current report, showed progress, according to Mr. Danforth. He commented, "Even though we plant to write off our entire Cuban investment, the International Division will still show a substantial profit."

The company's regular 30¢-a-share quarterly dividend will be payable Sept. 12 to stockholders of record Aug. 22.

Honeggers' & Co. Tells of Promotion

FAIRBURY, ILL.—Honeggers' & Co., Inc., here has announced the promotion of Charles N. Rasmussen from director of education and training to control division sales manager.

C. N. Rasmussen

The announcement was made by Elmer S. Roth, vice president and general sales manager. Mr. Rasmussen has been with Honeggers' & Co. since 1957.

In his new post he will supervise Honegger district managers and assistant district managers in Illinois and Wisconsin.

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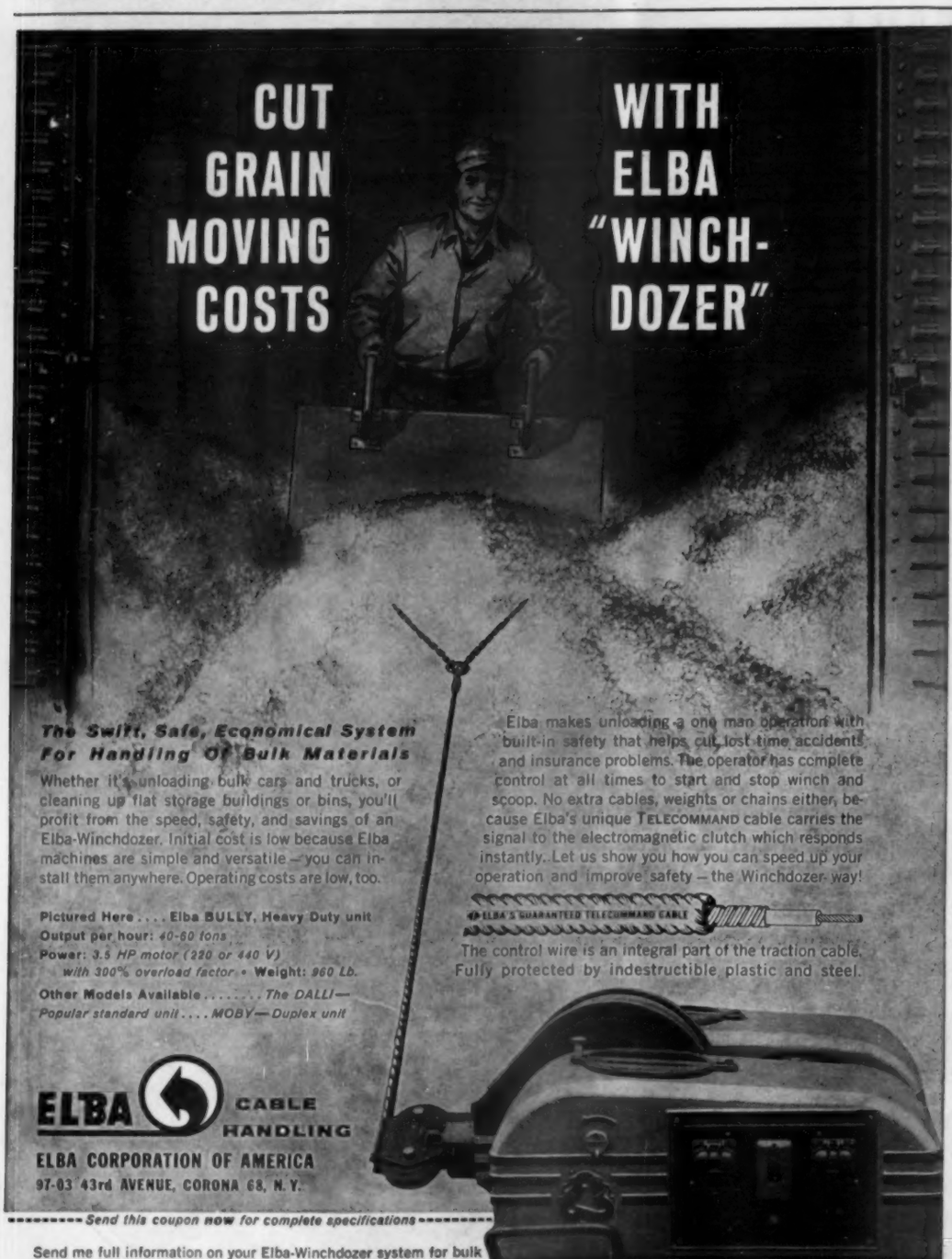

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See page 41

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A COMPLETE LINE OF FEED MILL MACHINERY

Chemical, Biological Study Made Of Milo Feeding Value

By W. G. Smith and Dr. E. L. Stephenson
University of Arkansas, Fayetteville, Ark.

Milo has been recognized as an important feed crop for many years, however, in the last few years it has made fabulous advances in yield per acre and in many places is becoming quite competitive with corn as a source of dietary carbohydrate for poultry.

In general, the feed industry has been cautious in its acceptance of milo, and nutritionists have received many questions such as, "How palatable is the product?" and "How variable are samples from different areas?" In addition to this skepticism, the amount of analytical data available on milo has not been as extensive as one would desire. The study reported herein was initiated in an attempt to answer some of these questions.

Research Cited

Payne (1934) reported that good quality kafir and milo when adequately supplemented with other nutrients, especially vitamin A, could replace either white or yellow corn, pound for pound, in a ration for growing chicks or breeding hens. These findings were confirmed by the work of Hammond (1942) and Melass (1943).

Harms et al. (1958), however, reported that as milo replaced corn in the diet, body weights of broilers decreased, and there was a trend for a decrease in feed utilization. These workers were able to confirm this in another paper (Harms et al. 1958a) in which they also reported a decrease in chick body weight from the addition of milo to broiler diets.

Pond et al. (1958) presented data which suggested that lysine and threonine were probably the most limiting amino acids in milo for growth of rats. Vavich et al. (1959) suggested that the biological value of protein obtained from sorghum grains which contained 10.5% protein was higher than that of sorghum grains which contained 15.3% of protein when fed to chicks.

In the study reported herein, 11 different samples of milo were obtained. These were procured through commercial channels and came from Oklahoma, Kansas and Texas. The methods by which these were procured were such that it was impossible to pinpoint the specific area within each state from which they were obtained. A sample of corn was also obtained from a local feed manufacturer in order that the milo samples might be compared to a corn sample. Determinations of protein, ether extract, ash, crude fiber, and dry matter were made according to A. O. A. C. methods. Microbiological assays for lysine and methionine were conducted according to the method of Henderson and Snell (1948) with L. mesenteriodes being the assay organism used.

After chemical and biological evaluations had been made, all samples were then fed to chicks. The composition of the basal diet is given in Table 1. In the diets which contained the different milo samples, these were substituted for corn in the diet.

White Cornish X White Rock chicks of mixed sex were used in the experiment. They were distributed at random into the experimental groups, with each experimental diet being fed to four pens of 10 chicks each. The results of the chemical, microbiological, and chick assays are shown in Table 2. An analysis of variance was performed according to the methods in Snedecor (1956), and any statement of probability herein is based on this analysis.

Differences in Values

When the various samples of milo were analyzed chemically and microbiologically and the data obtained subjected to statistical analyses, highly significant (P . 01) differences were found among the values with respect to protein, ether extract, ash, crude fiber, lysine and methionine contents.

The data relative to dry matter exhibited differences which were significant (P .05). Only in the cases of ether extract and lysine was corn significantly different from all the milo samples tested.

There were no significant differences in mean body weight gains or efficiency of feed utilization either between milo samples or between milo and corn. As would be expected, the chicks fed milo diets lacked yellow skin pigmentation.

Summary

In summary, we conclude that there were significant differences be-

(Turn to page 22)

TABLE 1. Composition of Basal Ration

Ingredient	Lb.	Gm.
Ground yellow corn or milo...	61.2	
Soybean oil meal (50% protein)	25.3	
Alfalfa meal	2.0	
Fish meal	5.0	
$CaCO_3$	1.0	
Dicalcium phosphate	2.0	
Salt	0.5	
Special tallow	3.0	
Dry whole whey	2.0	
$MnSO_4$ (technical)		8.0
DL methionine	0.1	
B complex mixture*		25.0
Riboflavin		1.4
Vitamin A (20,000 U.S.P. units/gram)		10.0
Vitamin D_3		.225
BHT**		5.7

*Two gm. riboflavin, 5 gm. pantothenic acid, 12 gm. niacin, and 50 gm. choline per pound.
**Butylated hydroxy toluene.

TABLE 2. Comparative Values of Corn and Milo Samples

Sample No.	Carbohydrate source	Chemical and microbiological assay of carbohydrate source: Dry matter %	Ash %	Ether extract %	Protein %	Crude fiber %	Lysine γ/G.	Methionine γ/G.	Chick assay*: Av. 4 wk. wt. (gm.)	Chick assay*: Grams feed/gm. gain
1	Corn	88.5	1.27	3.35	8.65	1.86	2420	1669	473	1.91
2	Milo	88.6	1.52	2.46	8.16	1.41	1933	1434	461	1.96
3	Milo	89.4	1.38	2.56	8.70	1.34	2003	1408	467	1.93
4	Milo	89.3	1.51	2.36	9.71	1.87	2270	1720	467	1.99
5	Milo	89.4	1.58	2.38	9.81	1.94	2825	1295	458	2.04
6	Milo	89.1	1.36	2.27	8.17	1.55	2017	1831	462	1.99
7	Milo	90.1	1.20	1.98	8.10	1.56	1615	1461	480	1.91
8	Milo	89.9	1.39	2.20	8.13	1.74	1680	1545	469	1.94
9	Milo	89.2	1.45	2.89	7.63	2.22	2183	1352	448	2.06
10	Milo	89.2	1.51	2.81	7.78	2.08	1992	1433	468	1.99
11	Milo	88.9	1.51	2.87	8.69	1.62	1827	1619	450	2.00
12	Milo	88.8	1.23	2.84	8.16	1.54	2100	1709	478	1.86

*Ground yellow corn or milo was incorporated in diet as shown in Table 1.

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Through merchandise displays in thousands of grocery stores and supermarkets throughout the country, Corn Products is presently stimulating consumer interest in eggs by means of a "Cool Eating Carnival" centered around the refrigerated food sections of grocery outlets. It features a free pound of Nucoa for the top of a Nucoa package and the word "eggs" from any carton of *fresh eggs.*

Suggestions for farm and grocery promotional tie-ins are a part of Wirthmore's continuing efforts to build better markets for poultrymen, dairymen and livestock raisers through more effective promotion of eggs, milk and meat.

Following Wirthmore suggestions, Corn Products Company is also currently promoting the consumption of broilers, along with Mazola Oil, in support of the National Broiler Council's Chick-N-Que program. Increased milk consumption is being encouraged by year-round advertising of Bosco Milk Amplifier as a nutritious chocolate flavoring for milk and ice cream.

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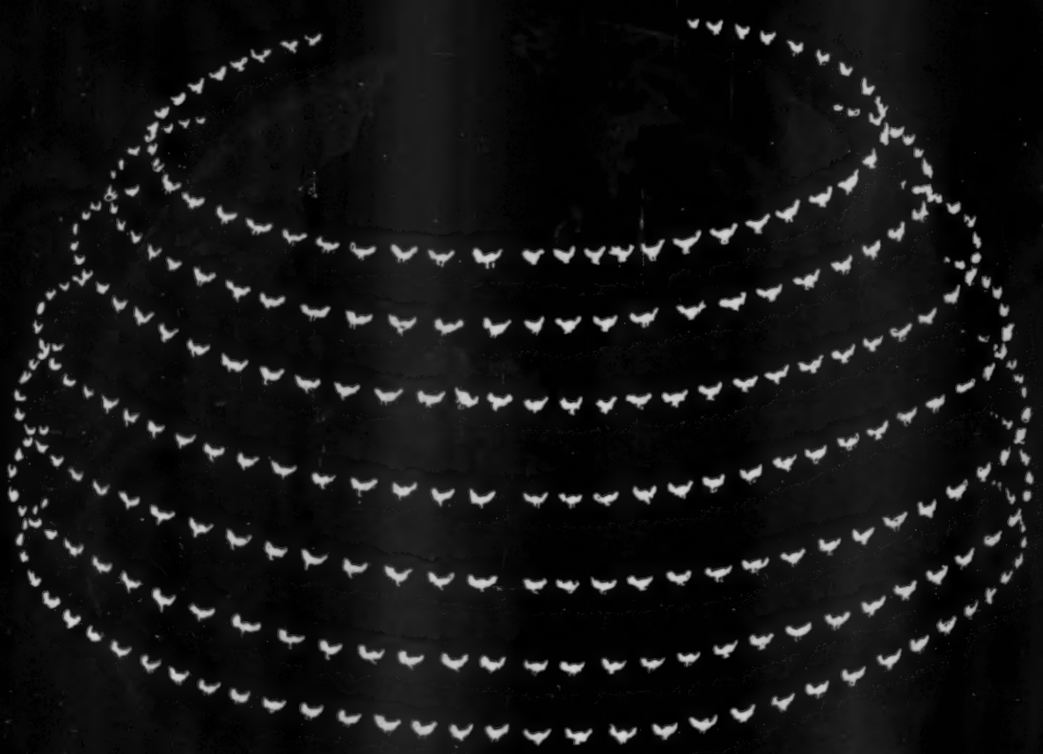

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ROOSTER CHICKS 'GET IT IN THE NECK'

MEMPHIS, TENN.—"The life of a chicken depends on its sex." So said J. P. Moore, Newton, Iowa, chicken sexer, at the recent American Poultry Hatchery Federation meeting in Memphis.

"Why the sex of a newborn chicken would make any difference to anyone is a subject of vast importance to the country's chicken raisers," Mr. Moore declared. "Farmers with egg laying flocks want hens . . . not roosters.

"That's why we check the chicks right out of the incubator. The hens are allowed to live and the males are destroyed. While this may sound cruel, only hens lay eggs. And since one rooster can play spouse to 12 hens, the other 11 roosters must be destroyed."

"Hens or pullets begin laying eggs at about 5½ months. A good hen will lay an egg a day for about 255 days before she quits. Then, she gets the ax. But the lucky rooster who managed to make it through the original screening process goes on to live for several years before he 'gets it in the neck'."

"While the life of a chicken sexer might sound most unromantic," said Mr. Moore, "it isn't as easy as one might think."

"What happens when a chicken sexer makes a mistake and slips a boy chick in with the girl chicks? This is very bad, but within a few months we can weed them out again . . . and then it's back to the frying pan."

tween milo samples with regard to dry matter, ash, ether extract, protein, crude fibers, lysine and methionine contents.

Only in the cases of ether extract and lysine were all of the milo samples significantly different from corn. In no case were these variables of sufficient magnitude to significantly alter weight gain or efficiency of feed utilization obtained with chicks when the various samples of milo were used interchangeably or when they were used to replace corn in the diet.

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Sale of 20,000 Feeder Calves Set

KNOXVILLE, TENN.—Twenty thousand feeder calves will be offered at 17 auctions from Sept. 21 through Oct. 13, according to an announcement by the University of Tennessee Agricultural Extension Service, Tennessee Department of Agriculture and Tennessee livestock associations.

All calves to be offered will be out of beef cows, sired by registered bulls. Angus, Hereford and Shorthorn breeds will be represented with both heifers and steers.

Names and dates of sale sites follow: Sept. 21, Clarksville; Sept. 22, Crossville; Sept. 23, Knoxville; Sept. 24, Jamestown; Sept. 26, Cookeville; Sept. 27, Pulaski; Sept. 29, Cookeville; Sept. 30, Nashville; Oct. 3, Greeneville; Oct. 4, Johnson City; Oct. 5, Rogersville; Oct. 6, Morristown; Oct. 7, Nashville; Oct. 10, Huntingdon; Oct. 11, Brownsville; Oct. 12, Newbern, and Oct. 13, Brownsville.

Those interested may contact county agents for complete information, or they may write Joe W. Houston, Box 1071, Knoxville; Fred C. Powell, 810 Broadway, Nashville, or Tom R. Langford, Box 948, Jackson.

50 Years in Business

MUSCATINE, IOWA—Universal Crushed Shell Co. and Universal Mineral Feed Co. here are observing their 50th business year. Universal Crushed Shell Co. was established in 1910 by Carl C. and George H. Gebhardt, father and son, primarily for the manufacture of crushed shell for poultry.

On discovering that shell flour was an excellent source of calcium, the company incorporated and began the manufacture of mineral feed for livestock.

George H. Gebhardt is now president of the corporation and the firm's products are distributed throughout the U.S. and Canada.

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ADM Announces Promotion of Two

MINNEAPOLIS — Assignment of new responsibilities to two vice presidents of Archer - Daniels - Midland Co. has been announced by E. A. Olson, executive vice president, agricultural group.

Carl C. Farrington, who has been manager of ADM's grain division, was named to the newly-created position of vice president of the agricultural group.

Ralph Bruce, manager of the oilseeds division, succeeds Mr. Farrington as manager of the company's grain operations except those on the Pacific coast, which are under the supervision of Henry W. Collins, Portland, Ore., also a vice president.

Mr. Farrington's new responsibilities, in addition to general assistance in the group's activities, will include coordinating the agricultural group's contacts with federal and state government, public groups and trade associations, developing plans for the agricultural group and its divisions and special attention to transportation problems for the group.

Mr. Farrington joined ADM in 1948 as manager of the grain division and was named a vice president soon after. He was elected a director of the company in 1949. Prior to his association with ADM he was vice president of the Commodity Credit Corp. He started his career in the U.S. Department of Agriculture in 1928 as an agricultural economist.

Export Program

In recent years he has represented the grain trade on a number of occasions in its dealings with the federal government. He was instrumental in developing the current grain export programs which have helped the U.S. move substantial amounts of surplus grains into foreign markets. He served as a U.S. representative on a United Nations committee to study plans for international action in case of famine and was named by President Eisenhower to an interim farm advisory committee in 1953.

Division Manager

Mr. Bruce has been manager of ADM's oilseeds division, which includes the company's soybean and linseed operations, for the past year. Prior to that he was manager of the linseed division.

With ADM since 1937, when he started in the grain division, Mr. Bruce later was foreman of the company's Soo terminal grain elevator in Minneauolis. In 1945 he became buyer and merchandiser of coarse grains and in 1947 was named flax buyer. He was elected an assistant vice president in 1955, when he was placed in charge of the flax department, and was named a vice president in 1957.

Report on Small Elevators Available

WASHINGTON, D.C.—A new marketing research report entitled "A Small Country Elevator for Merchandising Grain" is just off the presses. The report, which includes designs and recommendations, was prepared by the U.S. Department of Agriculture, Agricultural Marketing Service, transportation and facilities research division, in cooperation with the University of Georgia College of Agriculture Experiment Stations.

Authors are Heber D. Bouland, civil engineer, and Lloyd L. Smith, agricultural engineer, transportation and facilities research division.

This report is part of a broader research project covering improved designs of commercial grain storage facilities. It is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C., for 35¢.

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HEVNER SERUM COMPANY — Fremont, Nebraska
INDIANA POULTRY SUPPLY COMPANY — Evansville, Indiana
IOWA VETERINARY SUPPLY — Iowa Falls, Iowa
ROBERT J. MATTHEWS COMPANY — Canton, Ohio
NORTHERN STATES LABORATORIES — Luverne, Minnesota
VETERINARY & POULTRY SUPPLY, INC. — Goshen, Indiana
THOMPSON-HAYWARD CHEMICAL CO. — Chicago, Illinois
VETPO DISTRIBUTORS, INC. — Holland, Michigan
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H. MARK McNEAL COMPANY — Charlotte, North Carolina
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POULTRY HEALTH SERVICE — Jacksonville, Florida
BLUE GRASS SUPPLY — Lexington, Kentucky
JONES KENTUCKIANA — Poultry Supply Division, Louisville, Kentucky

SOUTHWESTERN

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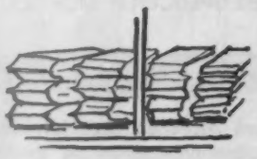

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Putting Research To Work

BY SPENCER H. MORRISON, PH.D., D. V. M.

Factors Affecting the Metabolizable Energy Content of Poultry Feeds

● I. R. Sibbald, J. D. Summer and S. J. Slinger, Ontario Agricultural College, Guelph, Canada; Poultry Science, Vol. 39, No. 3, May, 1960, pp. 544-556.

ABSTRACT AND COMMENT

Although opinions have differed rather widely on the practical application of metabolizable energy (ME) values to poultry rations, many poultry nutritionists, especially in college circles, have switched to ME values for reasons of claimed increased accuracy in comparison with the earlier and better known productive energy values (PE) of Fraps, or these values as modified by Titus. Acceptance of ME values in commercial practice has been very slow because the industry was much more familiar with PE values and they were common language to most informed feedmen and poultrymen.

A switch-over to ME values has been recommended for practical usage for some time by the workers at both Cornell and Connecticut, but not all college men have been convinced of the soundness of this belief. For example, a preliminary report was made to this effect by the Ontario workers at the 1959 annual meeting of the Poultry Science Assn. This work has now been published in detail in the May, 1960, issue of Poultry Science and now deserves some further analysis and comment.

Two Basic Assumptions

It is stated (correctly, I might add) by the Ontario researchers that the usefulness of ME values is dependent upon two basic assumptions. These are: (1) That the ME value of an ingredient is independent of the other diet components and (2) that the value remains relatively constant irrespective of the age or type of bird to which the material is fed. If these basic assumptions are not true, then several ME values will exist for each feed ingredient and greatly destroy the usefulness of the measure. In order to assess fully the conformance of ME values to the above fundamentals a series of tests was conducted.

The first experiment used both total collection and chromic oxide indicator methods for determining the metabolizability of diets. In later experiments only the chromic oxide method was used since the first trial clearly showed that this method was much less subject to variation and therefore much more precise than the total collection method. On the basis of all the experiments conducted it was indicated that many problems in technique and experimental methods remain to be determined before ME values can be accepted as satisfactory measures of the availbale energy in feeds for poultry.

Factors Listed

These factors are:

1. Corn apparently stimulates a greater deposition of carcass energy than wheat for only rather short periods of time. Wheat on the other hand appeared to be more efficiently used for carcass energy than corn when fed over longer periods of time.

2. ME values for corn were found to show significant variations when combined with different basal diets, but wheat showed no such variations.

3. It is indicated that ME values may not be additive under certain situations.

4. Although only one ingredient (corn) was tested with birds of different ages, the indications are that variations in ME values obtained for different aged birds are quite small, and may be largely disregarded for practical purposes. It is possible that other ingredients may behave quite differently.

5. The positive value for Alphacel (a constituent of some of the test diets) suggested that substitution of a portion of the basal high protein diet with test material may lead to the derivation of ME values which are actually made up of two parts, namely, the true metabolizable energy and also the energy resulting from increased utilization of the nutrient of the basal associated with the diluent. Because of this basic fact it seems necessary to explore further the methods for deriving ME values being presently employed.

6. Although data has been presented previously that ME may not be correlated with PE (Fraps and Carlyle, 1941; Fraps, 1944), this experimental investigation does substantiate this belief and further points up that the practical usefulness of ME values in ration formulation may be quite limited. A better measure would seem to use "adjusted" PE values such as that done by Titus and now widely used in the industry.

●

Timely and Worth Noting

It has been variously reported that in many different species of animals vitamin A may be extremely important at times of stress, disease and poor nutrition in helping them make speedy and prompt recoveries. This is not at all surprising, since vitamin A levels in the body are intimately tied up with the maintenance and integrity of epithelial and mucous tissues.

Although coccidiosis promotes an inflammation of the intestinal tract, which may vary greatly in severity, it always promotes increased secretion of mucous in the affected areas greatly retarding and inhibiting absorption of nutrients and critical vitamins, minerals, etc.

A series of experiments was undertaken at Cornell University to study the effects of vitamin A and carotene in chicks artificially infected with coccidiosis (Poultry Science, May, 1960, pp. 565-572).

Pertinent Findings

The pertinent findings are:

1. A level of vitamin A which is adequate under normal growing conditions (800 I.U. of stabilized vitamin A per pound of ration) failed to promote growth to the same extent as 8,000 I.U. per pound after the chicks were infected with coccidiosis.

2. Crystalline beta-carotene fed in the presence of an antioxidant (0.125% Santoquin) was not as effective as the same vitamin A unitage of stabilized vitamin A in maintaining feed consumption, subsequent growth rate and liver vitamin A storage levels.

3. The storage of vitamin A in the livers of both infected and uninfected chicks was much lower on the carotene diets than on those containing the same vitamin A activity in the form of stabilized vitamin A.

4. Even though the severity of the coccidiosis was similar in the chicks receiving low levels of vitamin A as compared to chicks on higher levels of the vitamin, recovery of surviving chicks as measured by growth and appetite was increased as level of the vitamin increased in the ration.

5. Even when high vitamin A levels were fed, the infected chicks contained lower liver storage levels than found in comparable uninfected lots at the same vitamin A intake and restricted to the same feed intake. This was especially true at one week after infection.

Further Emphasis

The above report further emphasizes the importance of fortifying rations used during "stress periods" with adequate vitamin A as well as sufficient protein, energy, antibiotics and possibly other additives. The usefulness of certain B vitamins at higher than normal levels during periods of stress and disease is still subject to some question and further investigation, but the importance of adequate A intakes can hardly be debated.

Georgia Poultry Institute Planned

EATONTON, GA.—Fifth annual Georgia Poultry Institute will be held at the Rock Eagle 4-H Club Center here Aug. 29 through Sept. 1. Sponsors of the event are Georgia State 4-H Club office, University of Georgia Agricultural Extension Service and the Georgia Poultry Federation.

Among the speakers and their topics: Dr. E. P. Singsen, chairman, poultry department, University of Connecticut, "Recent Developments in Restricted Feeding Programs"; Richard K. Noles, poultry department, University of Georgia, Athens, Ga., "Let's Take a Look at Culling"; Dale F. King, poultry department, Auburn University, Auburn, Ala., "New Facts and Fancies in Lighting the Laying Hen"; and Edward Karpoff, statistician, Agricultural Marketing Service, U.S. Department of Agriculture, "The Outlook for Broilers and Eggs."

Other program speakers include: J. I. Taggart, president, Chickmaster Incubator Co., Cleveland, Ohio, "Why Hatchery Sanitation Is Important to Every Poultryman"; C. A. Bottorff, pathologist, Lederle Laboratories, Pearl River, N.Y., "The Relationship of Environment to Poultry Health"; John Sanders, Food and Drug Administration, Atlanta, Ga., "Implications and Interpretations of the Feed Additives Laws as They Relate to the Poultry Industry"; Dr. E. P. Singsen, chairman, poultry department, University of Connecticut, Storrs, Conn.

"Disposal Pits — Problems and Pointers"; H. W. Bennett, Southeastern Poultry Service representative, DeKalb Agricultural Assn. in Athens, Ga.; R. D. Mobley, Cotton Producers Assn., Atlanta, Ga., "The Organization Structure of the Broiler Industry in Georgia"; and J. R. E. Taylor, Veterinary Research Department, DeKalb Agricultural Assn., DeKalb, Ill., "Developments in the Control of Epidemic Tremors (Avian Encephalomyelitis)."

Also on the program are the following: Dr. C. E. Howes, chairman, Poultry Department, Virginia Polytechnic Institute, Blacksburg, Va., "Condemnations: Your Problem and Ours"; Kenneth May, Poultry Products Technologist, Poultry Department, University of Georgia, Athens, Ga., and Dr. W. E. Clarke and Dr. J. A. Kimsey, veterinarians, Georgia Poultry Laboratories, Gainesville, Ga., "Tracking Down the Causes of Condemnation—An Interview"; Harold Lanier, supervisor of field service, Paradise Valley Poultry Co., Athens, Ga., "The Role of the Poultry Serviceman"; and Jack Tumlin, veterinary Research Department, McMillen Feed Mills, Inc., Decatur, Ind., "Preventive Medicine in the Poultry Industry."

Also on tap at the event will be a panel discussion on "Let's Take Another Look at Vaccination Programs." Moderator will be Arthur Gannon, extension poultryman, University of Georgia, Athens, Ga.

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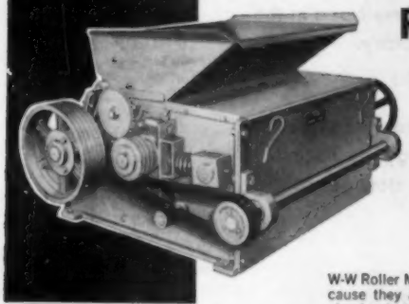

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FEED CONTROL COMMENT

By BRUCE POUNDSTONE
Secretary, Association of American Feed Control Officials
Kentucky Agricultural Experiment Station, Lexington

Stop Sale Notices

Disturbance on the part of a feed manufacturer is indicated in a question that was placed before the joint meeting of the States Relations Committees in Chicago. The question: "Should feeds be withdrawn from sale in retail outlets before the manufacturer has an opportunity to learn of the violation or before he has an opportunity to take action?"

On the face of it, arbitrary and "unwarranted" action involving a stop sale notice would come as a surprise if the manufacturer had properly registered his product, cleared the label well in advance of sale and, through manufacturing controls, felt he was properly meeting the claims made.

Most state officials in exercising this authority would base each case on its merits. Certain types of wrongdoing are interpreted as so minor as to not warrant such action. On the other hand, a major violation could conceivably justify quick and stringent action not only of the stop sale type but of sterner proportion.

Past Record Considered

I know of no feed official that does not take into account the past record and obvious intention of a manufacturer as interpreted from previous experience.

Let us say that samples of a scratch feed continually show adulteration with unground weed seeds. The unground weed seeds may not be noxious but competitive feeds do not contain them. This probably is not too serious a matter, but after continually calling this to the attention of the manufacturer and he persists, then one of the avenues open to the feed official is to issue stop sale notices as rapidly as such feeds appear.

Such a manufacturer might counter with the statement he has not had an opportunity to learn of the particular violation in question, yet why should he be advised of each shipment in advance of stop sale since he had been notified of previous violations?

A serious situation is sometimes found where the level of a drug is considerably over or under the

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Ralph Grier
See page 41

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amount guaranteed or even the wrong drug may be present and could cause serious economic loss. In such a case it would seem the control official is justified in asking the dealer to withdraw from sale at the time he notifies the manufacturer. There should be no delay on the part of anyone in matters of this kind. I believe a manufacturer would welcome such fast action on the part of the feed official as the manufacturer might thus be relieved of far more serious consequences later.

"General Complaint"

A manufacturer may be surprised when a stop sale notice is issued and the feed official involved may not have complained previously about the difficulty in question. It may rest entirely on a questionable claim on the label and this particular control official may not have written the manufacturer about it.

What manufacturers should realize is that a complaint, in accord with the policy of the Association of American Feed Control Officials, from one control official can generally be accepted as the point of view of most. This thus becomes a general complaint.

Control officials are in frequent contact with each other by telephone and letter, and even go so far as to exchange letters on points of this sort. When a manufacturer has been notified by three or four states with regard to his product and he proceeds to offer this for sale in another state from which he has not heard, he should not be surprised that the offending material is promptly removed from sale. If a product appears on the shelves of stores in Kentucky, for example, six months after lengthy correspondence between the manufacturer and control officials in other states and the aspects of the product that were criticized earlier have not been removed, as a feed official I would have no hesitation in asking that the product be removed from sale until the matter could be straightened out.

Other Methods

Many look upon a stop sale notice as one of the more painless methods of exercising control. There are, to be sure, other avenues open for meeting situations of this kind.

If an inspector quietly walks into a supermarket and gives the manager an opportunity to take the offending material off of his shelf and set it aside in the storeroom, this it would seem would cause a minimum of embarrassment. Sellers of dog food, on the other hand, maintain that shelf space is so important to them that they do not want to risk losing any such space by such a procedure.

The best answer to this is that if a label and all other features of a product are properly cleared well in advance with all states where sales may possibly be made, such a situation will easily be avoided.

Alfalfa Meal Total Up for May, June

KANSAS CITY—Alfalfa meal production for the months of May and June was up 14,800 tons, according to an American Dehydrators Assn. bulletin. Production losses sustained in June did not quite wipe out the higher May production, but substantially reduced the excess.

Disappearance for May and June was up by 5,300 tons though the June disappearance was reported to be disappointing.

Stocks at the end of June were up 46,500 tons from a year earlier. This figure was 8,900 less than the excess at the end of May.

To Clemson Staff

CLEMSON, S. C.—Dr. F. W. Boebel has been appointed associate poultryman and associate professor of poultry, according to Dr. B. D. Barnett, head of Clemson's poultry department. Dr. Boebel will conduct disease research and teach courses in poultry pathology.

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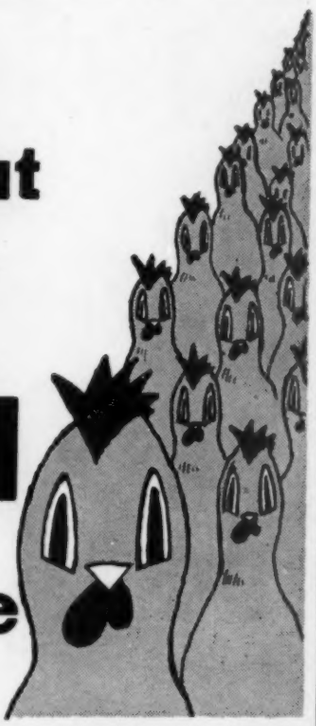

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Kansas City • MI 9-0386
Dehydrated Alfalfa

borden's feed supplements division

Use this blank space at our expense to figure your profit with Borden's Fermacto® 400

Get today's quotations on UGF sources – fish meal, dried whey, distiller's solubles. Take a sharp pencil. Then use the blank space provided above to figure how much you can save by adding FERMACTO 400 to your next ton of poultry feed.

Borden's exclusive blend of multiple fermentation factors, FERMACTO 400, is a highly concentrated and potent source of growth factors with built-in economics and performance. Using FERMACTO 400 is a matter of simple arithmetic and good nutrition.

Tests with layers show that the addition of only two pounds of FERMACTO 400 (total cost about 25¢) will permit you to replace ALL sources of UGF while actually increasing production and feed efficiency.

And with broilers, as little as 10 pounds of FERMACTO has successfully replaced as much as 150 pounds of other UGF materials – with superior results in weight gains and feed efficiency.

For further savings, Borden has developed complete supplements, containing all necessary micronutrients with FERMACTO 400 as a base, for specific feeds, such as Borden's 300 for layers and MG 2X AP for broilers and turkeys.

So figure the FERMACTO 400 economics above and then call on us for additional information about Fermacto's results in other rations, including hog and rabbit feeds. We welcome the opportunity to tell you about our complete custom-mix service to help you build better feeds – more economically.

borden's feed supplements division
350 Madison Avenue • New York 17, N. Y.
Better products through Borden research

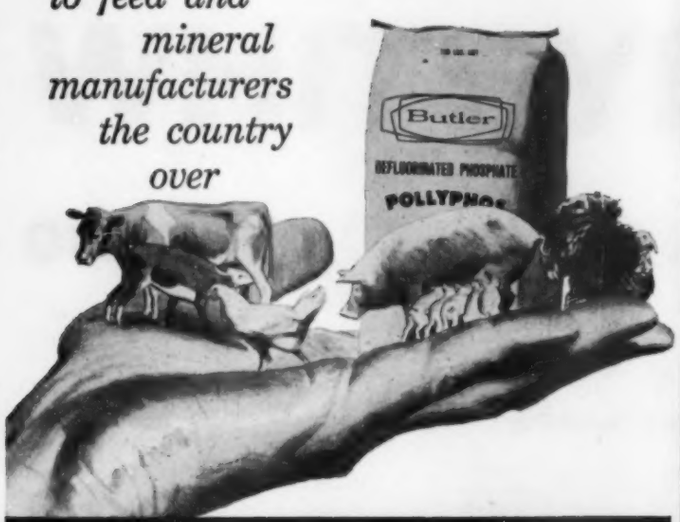
always FIRST with the BEST!

For prompt deliveries of high quality blackstrap molasses, your most dependable source is NATIONAL! Write, phone or wire today for quotations!

NATIONAL MOLASSES COMPANY
Executive Offices: OREland, PA.
Phone: Livingston 6-5900 (Philadelphia)

Butler

extends a helping hand with **POLLYPHOS** *to feed and mineral manufacturers the country over*



Butler Chemical Company produces a phosphatic feed supplement of the highest quality . . . POLLYPHOS . . . for the feed and mineral manufacturers across the nation.

You can always rely on the uniform high quality of . . . POLLYPHOS . . . its phosphorus content is 19% or above . . . with a minimum of 32% — maximum 35% calcium and no more than .19% fluorine. POLLYPHOS — defluorinated phosphate can be delivered to you at a low cost in 100-lb. multi-wall bags, or in bulk, — in truck or carload lots. For prices, phone, wire or write us or your nearest Butler Sales Agent.

Butler CHEMICAL COMPANY

Sales Division
1230 Esperson Building • Houston 2, Texas
Phone CA 2-9711

Plant & Warehouse
P. O. Box 938 • Galena Park, Texas
Phone OR 2-7587

SALES AGENTS: Warner Brokerage Co., Inc., Minneapolis • Carroll Swanson Sales Co., Des Moines • Warren Sales Co., Denver • James P. Sprigg Co., Los Angeles • White Star Concentrates Co., Portland • E. A. Towns Limited, Vancouver 1, B. C.

READY TO EAT—Murray Renick, who played a major part in founding the dog food company, talks with George Strickland, who is stacking the bagged dog food. Mr. Renick reports that the businesses of operating a feed mill and manufacturing dog food tie in very well. The dog food is made from cooked cereals, meat meal, fish meal, minerals, vitamins and poultry fats.

Feed Mill in Missouri Expands By Manufacturing Dog Food

By Al P. Nelson
Feedstuffs Special Writer

When a feed mill owner wants to expand his business, where can he look for new market opportunities? There are many opportunities, and they vary between areas, but the case of the Rolla Feed Mill in Rolla, Mo., is a unique and interesting one.

Murry Renick, owner of the Rolla Feed Mill, a Purina dealership, recently began looking for a way to expand his operation and came up with a separate company to manufacture dog food.

In cooperation with C. A. Blinne, Rolla, Mr. Renick formed the Bow Wow Co. early this year. Actually, the businesses of operating a feed mill and manufacturing dog food tie in very well, reports Mr. Renick. Here are a few examples of how this works:

1. Central purchasing. Mr. Renick can buy for his feed mill and dog food plant on a volume basis on many ingredients, thus effecting savings.

2. Employees can be interchanged between the feed mill and dog food plant and make full use of available labor on an annual basis.

3. Mr. Renick has expanded his territory on dog food to cover seven states, through the employment of four well trained salesmen.

4. Since the expansion of the dog food business rests largely on promotion and selling, these qualities tend to be carried over into the feed mill operation.

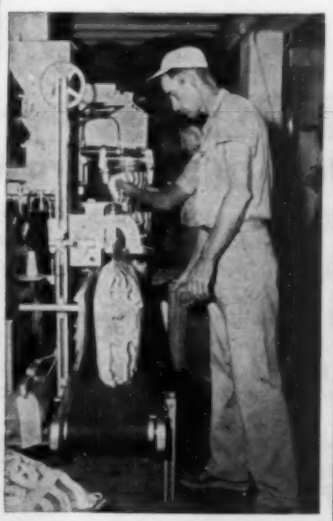
In his farm supply store, Mr. Renick can experiment with dog food displays and note their pulling power. This helps him recommend better display ideas to dog food dealers.

"Many of the manufacturing and sales promotion techniques of the dog food business help our feed mill, too," says Mr. Renick. "There is a carry-over effect among our 15 employees, making all of us more alert to merchandising opportunities."

Before he went into the manufacturing of dog food in a separate 5,000 sq. ft. plant, a mile distant from the feed mill, Mr. Renick made an extensive survey of the dog food business. The findings showed the existence of a regional market for the type of dog food he planned to make.

"Two years earlier, I had conducted an extensive survey of my feed mill trade area," Mr. Renick said. "Then, when I planned to start my dog food business, the survey technique came in handy. We made many calls on dealers and checked dog food displays in stores."

The firm's dog food is made from



PRODUCTION — George Strickland and Floyd Alers work on the dog food production line. One to two men can operate this plant, depending on the desired daily volume.

BAGGING—Floyd Alers is shown operating bagging equipment. The dog food is blended and packaged in 5, 25 and 50 lb. bags.

EXPANDA-KRAFT (newest, high-strength H&W bag stock) stops a Johnny Unitas pass

Johnny Unitas, all-pro quarterback, throws fast and hard and straight. We asked Johnny to help us demonstrate the strength and resilience of Expanda-Kraft. He had two targets: regular multiwall kraft and Expanda-Kraft. Each target had four plies of 50-lb. stock. The speeding pigskin ripped through regular kraft, but time after time it bounced off Expanda-Kraft. The picture shows where the ball left dents in the Expanda-Kraft.

Multiwall bags made of Expanda-Kraft:

Reduce breakage—Expanda-Kraft bags have two-way stretch, soak up shocks that would break ordinary kraft bags of equal basis weight.

Stack securely—They stack with less risk of slippage and stay in place while in transit, because of improved friction coefficient when compared with regular kraft bags.

Withstand moisture—Weathering and high humidity have little effect. They stay tough. Firm.

Print sharp—Their attractiveness increases your product's sales appeal. Expanda-Kraft White is unusually bright and takes fine printing beautifully. Semi-bleached and Natural shades do, too.

Fill fast—Expanda-Kraft bags have high porosity. And they're rigid enough to stand up to high production speeds on the filling line.

Expanda-Kraft, made by a new roll-crepe process, withstood the terrific impact of these Johnny Unitas bullet passes. It combines rigidity and moisture resistance with uniform toughness. Expanda-Kraft is available to multiwall bag manufacturers in 40, 50, 60, 70 and 80-lb. basis weights. Expanda-Kraft bags have proved their superiority over regular kraft bags in standard drop tests.

Expanda-Kraft is superior to regular kraft in impact test. These bags were filled with sand, suspended on long ropes, released and collided in mid-air. Only the regular kraft bag burst, yet it had the same ply construction as the Expanda-Kraft bag.

Contact your multiwall bag supplier for more information. Or, write *Hollingsworth & Whitney, Division of Scott Paper Company, Chester, Pennsylvania.*

SAFEGUARD YOUR PRODUCT IN EXPANDA-KRAFT®

®T.M. Scott Paper Company

HOLLINGSWORTH & WHITNEY DIVISION OF
SCOTT PAPER COMPANY

DOG FOOD—Ingredients for a batch of dog food are ready to go into the mixers. The two men pictured are, from left, Floyd Alers, manager, and George Strickland. In a 16-hour day, the plant can produce 45-50 tons of feed.

cooked cereals, meat meal, fish meal, minerals, vitamins and poultry fats. The food is blended and packaged in 5, 25 and 50 lb. bags.

Production equipment at the dog food plant includes two 2-ton Brower mixers. There is also a 40 ft. Universal elevator leg whereby ingredients are transported into the mixers.

A Bemis packaging machine and a Fischbein bag closer are strategically located near the mixers to facilitate production. One man can operate the packaging machine and extra men are added during rush periods. This plant, according to Floyd Alers, manager, can produce 45-50 tons in a 16-hour day.

Two large metal tanks for the storage of fat are now being built inside the plant. Each tank will hold a trailer load of poultry fat. The firm buys poultry fat in Texas and uses it to give added flavor to the dog food, said Mr. Alers.

To handle the fat flow from the fat tank to the mixer, the firm has a 6 h.p. high pressure Kisco boiler. A Viking pump is used to keep the fat free-flowing and get it into the mixing room area.

The dog food is packaged in red, yellow and brown bags made of heavy paper, polyethelene lined, which eliminates any seepage.

The salesmen who sell the dog food to dealers are supplied with information which gives the caloric requirements of growing puppies and adult dogs by weights. These facts help retail dealers advise customers about weight factors. The vitamin and mineral contents of each pound of the dog food are also listed for salesmen and dealer use.

"Our salesmen will help a dealer set up a dog food department, and may spend some time aiding the key accounts in promoting the product," reports Mr. Renick. "As a dog food manufacturer, we believe we can coach dealers in launching a dog food department successfully. If you start a dealer right, he will have the training to sell more dog food, which is to everyone's benefit."

Mr. Renick has worked out a salesman's weekly report sheet which is very easy to fill out. This report, including speedometer mileages, etc., also shows the amount of dog food each salesman has on hand and how much has been ordered by dealers. When Mr. Renick gets a weekly report from each salesman, he can quickly divide the salesman's expense by tons sold and figure the cost of selling a ton of dog food.

For example, if Salesman A sold 32 tons of dog food in one week, and his traveling expense totaled $192, the selling cost of a ton of feed would be $6.

"It is helpful to have all this information on one sheet," states Mr. Renick. "Naturally there is a difference from week to week on the cost of selling a ton of dog food, depending on salesman's efficiency, weather, distance to calls, and so on. But I go over these reports with the salesmen periodically, so they can see how the cost of selling dog food varies. I think it makes them better salesmen."

Antibiotic-Zoalene Combinations Asked

WASHINGTON—A petition asking that the Food and Drug Administration issue a regulation providing for the use of any one or mixtures of several antibiotics with zoalene as a chicken feed additive has been filed by Dow Chemical Co., Midland, Mich.

Dow's petition lists the antibiotics, which would be used with zoalene (3,5-dinitro-o-toluamide), as chlortetracycline, procaine penicillin, streptomycin, manganese bacitracin and zinc bacitracin. Approval is requested for not more than 50 gm. per ton of feed of any one or a mixture of the listed antibiotics used with no more than 125 parts per million of zoalene when fed to chickens for the control of intestinal and cecal coccidiosis and for growth promotion.

Abbott Appoints Sales Managers

NORTH CHICAGO—John J. Brennan, field sales manager, chemical marketing division, Abbott Laboratories, has been appointed sales manager, it has been announced by Floyd K. Thayer, vice president and director of chemical marketing.

He also announced that Robert G. Morton, formerly assistant field sales manager, has been promoted to field sales manager.

Mr. Brennan joined Abbott in 1951 as a special representative after receiving his B.S. degree in pharmacy from the University of Colorado.

Mr. Morton attended the University of Chicago and joined Abbott in 1955 as a sales representative. He was made assistant field sales manager in 1959.

BEEF UP with Z-P (ZYMO-PABST)

Field-Tested on Thousands of Cattle

INCREASES GROWTH GAINS • IMPROVES FEED EFFICIENCY

Look no further — Pabst has it! ZYMO-PABST!

Competitive products never come close to Z-P. Pabst is a basic producer of enzymes, and the success of Z-P proves that experience and know-how in this field pay off. Results of Z-P field trials are now complete. Write for your copy of these tests. See for yourself — add Z-P to your feeds and you'll add more profits to your operation.

ZYMO-PABST
the key to better feeding

Animal Feed Department
PABST BREWING COMPANY
Milwaukee 1, Wisconsin
TWX-MI 586 • Phone BRoadway 1-0230
Send me a copy of your ZYMO-PABST field trial results.
Name.....
Address.....
City.....Zone.....
State.....

ZYMO-PABST
Get it in the Midwest from
Carroll Swanson Sales Co.
Box 1034, University Place Sta.
Tel. CR 9-6881 Des Moines 11, Iowa

Ralph tells all, confirms rumor.
See page 41

Suggestions Made On CCC Grain Storage

WASHINGTON — The inter-governmental relations subcommittee, which has examined Commodity Credit Corp. grain storage policies and procedures, recently made some storage recommendations to the U.S. Department of Agriculture, according to a notice appearing recently in a news letter of the Grain and Feed Dealers National Assn.

The subcommittee recommended that USDA revise its grain storage policies to avoid encouraging further expansion of commercial storage facilities in areas where such expansion is unnecessary and undesirable.

A second recommendation suggested that USDA revise its policies with respect to utilization of commercial storage facilities so that preference over existing government facilities will not be required when it is not consistent with the effective and efficient operation of CCC business.

A third recommendation asked that out-of-line movements for storage be discontinued unless such movement clearly offer savings over any reasonable alternative actions, including acquisition of additional government storage facilities at or near the point of origin. Existing empty government storage space at the point of production should be used for storage of takeover grain before allowing deliveries of such grain to commercial warehouses more than a reasonable distance away, recommended the committee.

Appointed Manager

DES MOINES — Howard M. Cole has been appointed manager of McKesson & Robbins, Inc., here, central Iowa distributor of feed and industrial chemicals.

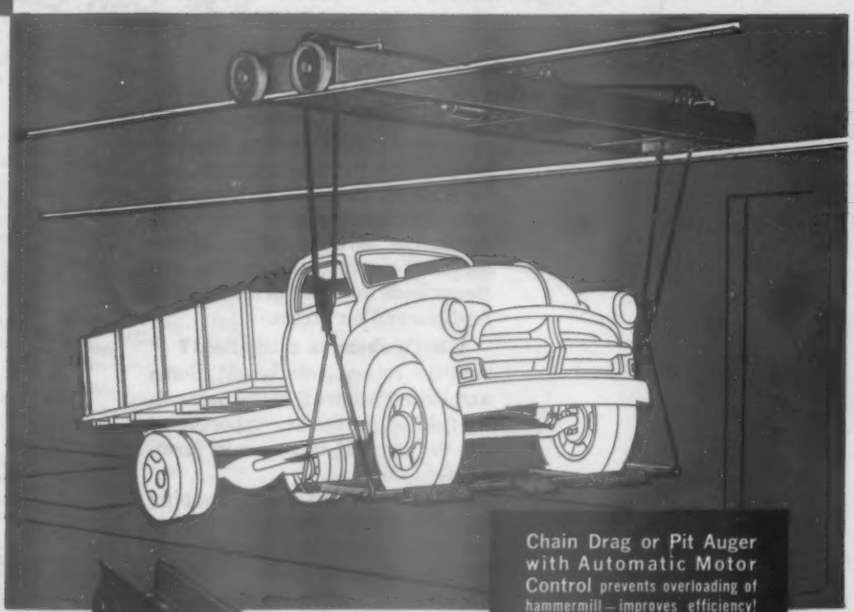
VAN DUSEN HARRINGTON
DIVISION
F. H. Peavey & Co.
GRAIN SOYBEANS FLAX
Founded 1855
MINNEAPOLIS DULUTH

KEES & COMPANY
Processors of DRIED FISH SOLUBLE PRODUCTS
A "MUST" IN EVERY SWINE OR POULTRY RATION
Call or write for complete information and price
327 S. La Salle St., Chicago 4, Ill. Phone HArrison 7-1528

"team up" these 2 for extra grain handling profits

KELLY DUPLEX electric truck hoist

Designed to unload trucks in less time, with less power . . . the Kelly Duplex Electric Truck Hoist combines all welded steel construction, tough steel cable, heavy duty motor and special gearing to lift loads with absolute ease and safety. A positive action switch controls all raising and lowering—lifts truck to any height up to 15 feet, stops operation instantly at any point, holds truck at desired angle for any length of time. The entire hoist moves freely on an overhead steel track (so flanged that wheels cannot "jump the track" regardless of stress) . . . and is easily positioned for unloading into any number of dump sinks. Available with either a ramp type or a mat type cradle, this machine can be furnished in any width and can be powered to meet your requirements.



KELLY DUPLEX single and double chain drags

Unsurpassed for steady, even delivery of grain and ear corn. Single chain drags have V-trough construction—10" wide bed—choice of wood or steel box. Double chain drags are made entirely of welded steel—are available with 12", 16", 20" or 24" wide bed. All drags can be made in any length with either single or double gear reduction . . . can be powered by motor or belt drive . . . and can be furnished with variable speed control.

Chain Drag or Pit Auger with Automatic Motor Control prevents overloading of hammermill—improves efficiency!

Control connects to both hammermill motor and feeder motor. If hammermill motor shows overload from excessively rapid feeding—the motor on the feeder automatically stops until load passes—then automatically starts again.

CLIP ALONG THIS LINE . . . FOLD OVER, FASTEN . . . AND MAIL TODAY!

FIRST CLASS Permit No. 72 SPRINGFIELD, OHIO

VIA AIR MAIL

BUSINESS REPLY ENVELOPE
No postage necessary if mailed in the United States

—POSTAGE WILL BE PAID BY—

The Duplex Mill and Manufacturing Company
Springfield, Ohio

FOLD OVER ON THIS LINE . . . FASTEN (STAPLE, GLUE, TAPE)

The Duplex Mill & Mfg. Co.
Springfield, Ohio

Yes, I'm interested in KELLY DUPLEX machinery. Without obligation, please send me complete information on the items checked.

☐ Information on free mill planning and layout service.

☐ Electric Truck Hoist
☐ Chain Drag
☐ Pit Auger
☐ Vertical Feed Mixer
☐ Hammermills
☐ Twin Molasses Mixer
☐ Vertical Screw Elevator
☐ Portable Screw Elevator
☐ Bucket Elevator
☐ Corn Crusher-Regulator
☐ Corn Sheller with Blowers
☐ Regular Corn Sheller
☐ Pitless Corn Sheller
☐ Combined Sheller-Cleaner
☐ Gyrating Cleaner
☐ Corn Scalper
☐ Corn Cutter and Grader
☐ Cob Crusher
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☐ Forced Air Carloader
☐ Magnetic Separator
☐ Grain Feeder
☐ Grain Blower
☐ Complete Line Catalog

NAME _____
TITLE _____
FIRM _____ PHONE _____
CITY _____ STATE _____
FEEDSTUFFS

HAVE YOU ENTERED ALL THESE MARKETS FOR BEEF FEEDS?

Most of these markets are new and growing fast. With Aureomycin in your formula feeds, you have a major factor in helping you enter new fields and build sales volume.

Exploitation of *more* markets for beef feeds has been undertaken by many feed manufacturers, particularly during the past 10 years.

Notable increases in sales volume have been made in creep feeds for calves, fortified range supplements for wintering cattle, and stress feeds for cattle in commercial feedlots and on farms.

What's ahead in cattle field?

And the future looks bright. Some authorities believe that the beef cattle field offers the big opportunity for the greatest increases in formula feed sales.

Important factors in stepping up sales volume have been Cyanamid's advertising and promotion of formula feed for beef . . . and the successful results in disease control achieved by the wide-spectrum antibiotic AUREOMYCIN* in these feeds.

Cyanamid's current advertising

Shown on the opposite page are two current Cyanamid advertisements. One of them features formula feeds for feedlot cattle, with particular emphasis on stress feeds. The other explains the many different ways in which formula feeds containing AUREOMYCIN pay off in a beef operation. Both these advertisements help you sell formula feeds. These are the kind of advertisements Cyanamid will continue to run this fall and throughout next year. If you plan to expand your cattle feeding markets, get in touch with your Cyanamid representative who will be glad to work with you. American Cyanamid Company, Agricultural Division, New York 20, N. Y.

**AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.*

Feedlot operators
Aureomycin to
to keep them ga
get them off fee
First factor in marketing profitable beef is to get feeder cattle on full feed faster by offsetting the stresses of shipping, unloading, sorting, changes in surroundings and in temperature.
How to do it? With stress feeds containing AUREOMYCIN®, fed for the first 30 days. Animals in poor shape and down in weight can be quickly restored to normal condition and feeding, when AUREOMYCIN is given in the feed as soon as cattle go into the feedlot. AUREOMYCIN is the wide-spectrum antibiotic that does the most effective job in preventing the diseases that often follow stresses: respiratory infections, secondary bacterial infections, and subclinical diseases.
Cattle gain every day
Second factor in marketing profitable beef is to keep cattle realizing their full growth potential *every* day they're on feed. After the initial stress period is over, you can continue cattle all the way to market on feeds that furnish the recommended 70 milligrams of AUREOMYCIN per head per day. AUREOMYCIN helps increase average daily gains up to 16% every day your cattle are on feed. It reduces the incidence of foot rot and liver abscesses.
Market beef sooner
Third factor in marketing profitable beef is to get cattle *off* feed faster and on to market sooner.
With AUR
cattle use
gains—*not*
reach the
in shorter
feed cost.
"bloom" bu
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Ask your fe
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AUREOMYCIN help
diseases caused by
CYANAMID SERVES THE MAN WHO MAKES A BUSIN

CYANAMID
AUREOMYCIN
IN FORMULA FEEDS

CYANAMID SERVES THE MAN WHO MAKES A BUSINESS OF AGRICULTURE

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manufacturer, or

WHERE DOES AN ANTIBIOTIC PAY OFF IN A BEEF OPERATION?

If it's the wide-spectrum antibiotic, Aureomycin, the pay-off is everywhere — through the power of this antibiotic in controlling disease

Your prime interest in beef may be a cow and calf herd, or a feedlot operation. Whichever it is, you get generous benefits from feeding AUREOMYCIN®. Experimental trials with thousands of cattle have shown that AUREOMYCIN pays in every phase of a beef operation.

Helping cattle through winter

The *fortified* supplement has come into its own as cattlemen recognized that cows and steers need *protein, vitamin A* and *minerals* — plus an *antibiotic*—to resist infection due to winter stresses and come through strong and vigorous.

When you use wintering supplements fortified with AUREOMYCIN and other health-promoting ingredients, here's what you get: your cows stay healthier, are in good flesh at calving time. They are able to drop sturdy calves and support them to weaning. You increase chances of a bigger calf crop. Your over-wintering calves put on more growth per feed dollar invested. Your replacement heifers reach sound, vigorous maturity earlier.

Making creep feeds pay even more

AUREOMYCIN in creep feeds helps calves develop the stamina to resist disease. It protects calves through stresses such as castration, branding, dehorning and temperature extremes. It brings calves through weaning without a starved-out look. It reduces scouring. It helps you sell better-looking calves and yearlings.

Controlled feeding experiments with AUREOMYCIN in creep feeds have proved these profit extras: Up to 50 pounds more per head in 120 days' feeding; up to 16% saving in feed; up to $11.53 extra return per head.

Saving feed in the feedlot

Feeder cattle provided with rations containing AUREOMYCIN as soon as they go into the feedlot are protected against stress, respiratory infections, foot rot, liver abscesses, subclinical diseases. *And they go on full feed fast.*

AUREOMYCIN helps increase daily gains up to 16% *every day* your cattle are on feed. It pays off in *any* type of ration, including those with a hormone. You save feed because cattle use feed more efficiently. You sell cattle with the "bloom" buyers prefer.

Why Aureomycin is so effective

AUREOMYCIN is a wide-spectrum antibiotic. That means it attacks a wide range of disease organisms, exerts powerful activity in overcoming them. When AUREOMYCIN is in the feed, cattle don't waste feed fighting disease. They use it to put on cheap gains.

See your feed manufacturer

Ask your feed manufacturer or feed dealer for feeds containing the recommended amount of AUREOMYCIN for stress feeding and for continuous feeding. American Cyanamid Company, Agricultural Division, New York 20, N. Y.

®AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.

AUREOMYCIN (plus protein, vitamin A and minerals) in range cubes protects against stresses, brings cattle through winter strong and vigorous.

Shipping, unloading, castration, dehorning — AUREOMYCIN in feed gives cattle vigor to withstand these stresses, resist diseases that may follow.

eep feeding has always paid. Now, h AUREOMYCIN protecting health, as gain faster, pay off better.

In feedlot rations, AUREOMYCIN gets cattle on full feed fast, keeps them gaining, gets them to market sooner.

CYANAMID SERVES THE MAN WHO MAKES A BUSINESS OF AGRICULTURE

CYANAMID
AUREOMYCIN
IN FORMULA FEEDS

DEHYDRATED
and
SUN-CURED
ALFALFA MEAL
Pellets • Crumbles
Bagged • Bulk
THE A. B. CAPLE CO.
Toledo 5, Ohio

Firm Adds Fat to Finished Pellets

By Special Correspondent

FITCHBURG, MASS.—The United Cooperative Farmers (UCF) feed plant here is now using a recently installed liquid fat impregnating unit to add fat to finished pellets for poultry.

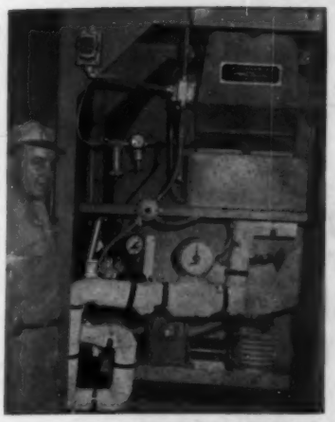
Like others in the industry, this firm noted problems with soft pellets if an attempt was made to use levels of 3-5% added fat in the feed. Now, all but 1% of the fat is left out when mixing the feed. The remaining added fat is sprayed onto the pellet in the new unit, resulting in a harder rather than softer pellet for broilers.

The new unit resembles a rotating boiler with an open end. Pellets flow in one end, and as they work toward the discharge end, the liquid fat is applied from the top of rotating drum.

The UCF mill superintendent, Toivo Niemi, feels that the system is a partial solution to the pellet problem for broilers, and he suggests that further work be done on possibilities of its use on other types of feed.

The new fat impregnating unit, located on the fifth floor of the mill, is remotely controlled from the first floor. Mr. Niemi said it has a minimum capacity of 5-6 tons per hour, with a maximum of 18-20 tons per hour. Precision controls regulate the amount of hot fat applied to the pellets, ranging from 3 to 8%. It is equipped with a volumetric feeder, variable speed drive and a Viking positive displacement pump.

The installation was made by the B. Clay Lee Co.



FINAL ADJUSTMENTS—Clay Lee, manufacturer of liquid fat impregnating unit, makes final adjustments.

EXAMINES PELLETS—John Ajala examines pellets impregnated with fat in new unit operated by United Cooperative Farmers feed plant at Fitchburg, Mass.

Make sure the fats in your feeds
are protected by Tenox antioxidants

With the wide variety of inedible fats and meat scraps being processed by renderers today, it is more important than ever that the fats and meat meal you buy be protected by the proper antioxidant.

Tenox antioxidants give you the safeguard you need. They preserve the vitamin content and nutritional value of your feeds, while keeping them fresh and palatable.

In recommending Tenox to your renderer, you are assured of receiving greases, tallows and meat meal of maximum stability. As the leading supplier of food-grade antioxidants, Eastman offers users the widest range available. Our long experience enables us to recommend not only the most effective formulation, but also the most efficient method of adding it.

If your renderer is not already using Tenox, it will pay you to call this to his attention. It's your best guarantee that your fat-containing feeds will win—and keep—satisfied customers.
EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of Eastman Kodak Company, KINGSPORT, TENNESSEE.

Tenox
Eastman food-grade antioxidants

Make Your Customers
GOOD Customers... all year 'round
SUPREME Brand
Condensed BUTTERMILK
HERBERT K. CLOFINE, Inc.
MILK PRODUCTS
315 South Smedley St. Phila. 3, Pa.

Ralph's line is never too busy. *Call him.*
See page 41

Products of Progress

Post No Bills

CYANAMID
AUREOMYCIN®
products

CORONET DEFLUORINATED PHOSPHATE (CDP)

SERVALL
STAZDRY

EGGSHELL BRAND

OYSTER SHELL

National Alfalfa Meal
NATIONAL

GRAN-I-GRIT

SMITH'S
Lifeline Menhaden
FISH MEAL

DOWZENE D.H.C.
53% Piperazine

ANIMAL & POULTRY
HEALTH PRODUCTS
Cyanamid Vaccines
Kore, Sulmet, Targot

THE FOX CO.
NEWFIELD, NEW JERSEY
OXford 2-4400
BROADWAY, VA., and SELBYVILLE, DEL.

Company Builds Business on Special Feed Mixes, Long-Range Programs

By John Ulrich
Feedstuffs Special Writer

The Fox Milling Co. at Opportunity, Wash., has built a steady business on special feed mixes and a long-range feeding program for all livestock and poultry.

Located in the Spokane Valley, just east of Washington's second largest city, Fox also operates a growing garden store.

Operating in a trading area within a radius of 30 miles, the company's feed trade has been extended through franchise dealers in other areas. This program is only a year old and, according to Fox manager Marv Hunter, is building slowly on the theory that you can do the best job with only one dealer at a time.

Base Mix Prepared

The Fox operation includes the preparation of a base mix. The firm buys (in carload lots) a vitamin-trace mineral supplement from Ultra-Life Laboratories at East St. Louis and then adds to it other ingredients, such as animal fats, minerals, whey, etc., to make a base mix.

This base mix is marketed through the firm's own feeds or through those of the franchised dealers. There is a formula for each type of livestock, even horses. The dealer adds 50 to 75 lb. of this base mix to each ton of feed.

"This system permits the small mill operator to compete effectively," said Mr. Hunter. "A small dealer can sell fortified feeds of good quality."

The base mix also is available to feedlots and other feeders who have their own sources of other ingredients and do their own mixing.

It may be noted that saddle horses are an important factor in Fox' business. The garden store has a corner devoted to supplies for horse owners, and the feed mill is one of only two in the area furnishing feeds prepared especially for horses. There are an estimated 3,000 saddle horses in Spokane County, and the number is increasing annually.

In connection with the feed program for farmers, Mr. Hunter said that farmers are shown how they can increase milk, meat or egg production by continuing to follow a sound nutritional program.

"We have studies to back this up," he commented.

Fox also offers laboratory analyses of hay and grain used as part of a feeding program. By having his feed analyzed, the farmer knows what nutrients his livestock are getting and what should be added. Samples are sent to East St. Louis, and results can be obtained a few days later, Mr. Hunter said.

The big volume of the Fox operation is in branded feeds ("Fox Ultra-Lifed Feeds"). Although the firm does some custom mixing and pelleting, much of the business is in the branded feeds.

The six-year-old mill has grinding, mixing, molassesizing, pelleting and steam rolling equipment. It is served on one side by a spur track and on the end and one warehouse side by truck docks.

FARM STORE—Marv Hunter, Fox Milling Co. manager (sitting), demonstrates a lawn mower to a customer at the retail farm store which is a part of the Fox feed mill. A good promotion program helps the store pay off.

GEAR FOR HORSES—Tack of all kinds is sold at Fox Garden Store. Horses form an important part of the Fox Milling Co.'s business. The feed mill is one of only two in the area furnishing feeds prepared especially for horses. There are an estimated 3,000 saddle horses in Spokane County.

FOX GARDEN STORE—The retail store in Opportunity, Wash., is shown above. This low building includes 100 ton of flat storage for bagged feeds which are served through the truck dock at left. Animal health products, farm chemicals and garden supplies are attractively displayed in the store.

The work floor is an "L," 40 by 12 ft. on its long leg and 10 by 12 ft. on the short. The operation is in three decks: Storage on the top, mixing, molassesizing, etc., on main floor; hammermill, pellet cooler and crumbler in basement.

Grain comes to the mill by truck, onto a scale with a hoist to dump into a hopper. The grain is distributed from the hopper into 11 different storage bins with a total capacity of 200 tons. Fox also has 300 tons of flat storage and about 100 tons of storage for oil meals, etc.

The same leg which serves the bins also carries custom grain to the milling operation.

Grain is moved directly from the elevator to the mill and direct to the hammermill. Smaller amounts of ingredients are handled by weigh-buggy to the mixer.

Mixed feed can be moved from the mixer to (1) bulk storage bins; (2) to the pellet mill bin, or (3) to bagging-off bins. From the pellet mill, pellets go to the cooler in the basement where they can be shunted through the crumble rolls or by-pass this to be carried to storage or the top of the head house.

One Size of Pellet

Mr. Hunter says research indicates 3/16 in. pellets as the most satisfactory and that is the only size made. Just in the last eight months the mill has increased its production of pellets (or subsequent crumbles) and reduced proportionately its meal production so that the latter is only about 10% of present production.

"Feed moves from the mixer through the molassesizer where either fat or molasses can be added without creating balls," Mr. Hunter explains.

Mr. Hunter says the mill is designed to do away with as much horizontal operation as possible.

"The flow is simple; we can go in any direction with anything and gravity does most of the work," he said.

"Despite the rail spur, millfeed comes to the Fox mill in bulk trucks. A boxcar would bring 30 tons at a time and require too long to unload. Storage is limited and the haul for the truck is only 28 miles from the National Biscuit Co.'s operation at Cheney, Wash., just on the other side of Spokane. Trucking, therefore, is economical, fast and saves man-hours, since a truck can be unloaded in 30 minutes.

"Soybean meal does come by rail as does the Ultra-Life supplement mentioned earlier."

Fox normally has two mill men who handle receiving, mixing, processing and putting the finished bagged products on the sales floor. Occasionally they get in a delivery. A third, all-purpose man helps in the mill, delivers and works in the retail "garden store." Manager Hunter gets a hand in wherever it is needed. During the spring garden rush, a girl helps out in the store and another man works part-time.

The retail store has been on its present site for 20 years. (Fox Milling is located at Sprague and Pines Road. Before the freeways were constructed, Sprague Avenue was the main east-west road from Spokane to Idaho.) For a time, the store was the retail outlet for another company, and when Mr. Fox started his own garden store business, he was

REAR VIEW—Photo of the feed mill from the rear shows the rail dock at left and truck entrance to the elevator at the right.

BAGGING AREA—A portion of the work floor, the bagging area, is shown in this photo. Fox offers laboratory analyses of hay and grain used as part of a feeding program. Much of the firm's business is in branded feeds.

Nutrena dealers find out first hand about the Nutrena Pigloo System of hog production at the Nutrena Research Farm, Elk River, Minn.

L to R (first row) Dorland Scott, Chillicothe, Mo.; Jon Isch, Morrill, Kans.; Woodrow James, Bruce, Miss.; Lawrence Freking, Remsen, Ia.; Arthur Leinenbach and Ed Harker, Jasper, Ind.; Charles Donaldson, Coffeyville, Kans.; Ray Revier, Veblen, So. Dak.; Norm Burmeister, Elm Mott, Tex.; Max Olsen, Castlewood, So. Dak.; Luther Fields, Waterman, Ill.; Charles DeVane, Clayton, Ala.; Pat Patton, Nutrena Training Director. (Back row) Wayne Ennen, Ursa, Ill.; John Barbee, Richlands, N.C.; Paul Starr, Camden, Ala.; Emmett Strickland, Luverne, Ala.; Douglas Stauffer, Bloomington, Ill.; Ken Freitag, Huron, So. Dak.; Robert Scheurer, Portland, Mich.

Ex-Staley dealers "flying high" after first training session at Nutrena's 820 acre schoolhouse

Any dealer who goes through this feeding school can't help coming away better able to solve problems in his own area.

If you have doubts about it, just ask any of the Nutrena dealers who have been to Nutrena's Research Farm, near Elk River, Minnesota, this summer. (Staley dealers switching over to Nutrena were there as a result of Nutrena's recent purchase of the A. E. Staley feed business.)

The Farm at Elk River is Nutrena's newest research facility. On it, you'll see management systems and equipment being proved out . . . the like of which you won't see on any other farm in America. But don't get the idea this is some kind of fancy showplace. It's not. It's a work-a-day, pay-its-way kind of farm . . . one where feeding programs, management systems and new kinds of housing must prove their value before fitting into Nutrena recommendations.

Most Impressive

The ex-Staley dealers, new to the Nutrena organization, had their first real exposure to the Nutrena Swine and Beef programs. They saw the isolation principle at work in Nutrena's exclusive Pigloo® System. They learned the "whys and wherefores" about this proven system that turns out 1,185 pigs a year on half a man's labor.

Luther Fields tries his hand at figuring a ration for fattening feedlot cattle on the Nutrena Beefcake Prescription Calculator.

A discussion group gets set to review an assignment on swine feeding problems during a classroom session.

And they were impressed with Nutrena's Beefcake Prescription Calculator . . . an exclusive machine and system for taking the mystery and guesswork out of figuring cattle rations. Actually worked out rations themselves . . . saw how they could be of greater service to their customers.

And by the end of the week, they had a much better understanding of the differences in the Nutrena program and how these differences would help them reach their goals in the feed business—faster than any other way they had ever seen.

A smaller group pauses a moment for the photographer by the cattle feeding lots with Nutrena Beef Programs Manager, Jim McDougall.

About the Rumor

You may have heard it in the field . . . "that Nutrena is really up to something". This is one rumor we're happy to confirm. The changes, the advancements in feeds and systems, the new approaches to selling have been more than three years in the making. But they're ready for you right now. This fall's selling campaign will be the most vigorous in Nutrena's 40 year history.

We urge you to **Check with Nutrena.** And don't wait. The fall selling season is almost upon us. Be ready to move ahead with these new programs. Don't bother writing. Pick up the phone and call collect . . . Ralph Grier, General Sales Manager, Nutrena Mills, FEderal 8-8511, Minneapolis, Minnesota. How far is it to your phone?

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40 years of leadership in animal nutrition

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one of three on the street. Now, Sprague Avenue is lined with similar stores.

Mr. Fox is still one up on most of them. He has a keen sense of promotion. An example is the fourth annual open house held this year. Baby chicks were given away and the sales representatives of his suppliers were on hand to help push their products. The local radio station put its disk jockey right in the store.

Automation will come, but meanwhile Fox Milling Co. is moving carefully toward better operation based on good planning.

In New Quarters

PARK RIDGE, N.J. — Products Blending Co., formerly of Bronx, N.Y., has moved to new quarters here. Plant and offices are now located at 174 Kinderkamack Road.

The firm's move was made effective July 1.

Firm Changes Name Of Panogen Division

CHICAGO—The name of Panogen Co., manufacturer of agricultural chemicals and a division of Morton Chemical Co., has been changed to Agricultural Division, Morton Chemical Co. The announcement was made by J. E. Rich, president of Morton Chemical Co.

Mr. Rich explained that the name was changed to describe more accurately the division's rapid growth in the agricultural chemical field. During the past few years, the Agricultural Division has expanded its line from Panogen liquid seed treatments to include grain fumigants, soil fumigants, soil and turf fungicides and animal repellents.

Morton Chemical Co. is comprised of an industrial chemical division in addition to the renamed agricultural division.

A. A. Deverick Edward Brown

Baughman Co. Names Three to Sales Posts

JERSEYVILLE, ILL. — Appointment of three men to sales positions with Baughman Manufacturing Co. here has been announced.

Allen A. Deverick, who had been regional sales manager for the firm with headquarters in Tulsa, Okla., has been named vice president in charge of sales. Before joining the Baughman Co., Mr. Deverick was in sales work with Pure Oil Co.; Compton, Inc., and Sunray Mid-Continent Oil Co.

Edward Brown has been appointed central district sales manager. Mr. Brown, who lives in Indianapolis, covers a territory that includes: Michigan, Wisconsin, Illinois, Indiana, Ohio, Kentucky and Tennessee. Before joining Baughman, Mr. Brown was a district sales manager for Midwest Body Co.

Zachary Dean, Tulsa, Okla., has been named sales manager for the western district of the company. For six years he has been an independent oil operator and drilling contractor in Kansas and Oklahoma.

The Baughman Co. manufactures bulk feed bodies, hog and cattle feeders, conveyors and automatic self-unloading transport bodies.

FDA Seizes 79 Tons Of Frozen Eggs

WASHINGTON—Nearly 79 tons of frozen whole eggs containing rotten eggs were seized in nine actions by the Food and Drug Administration. The agency reports that the seizures prevent the use of 5,256 thirty-pound cans of suspect eggs by food manufacturing firms until cans with good and bad eggs could be segregated.

FDA added that it has virtually completed the first part of a program to assure the wholesomeness of frozen eggs by stamping out illegal traffic in incubator rejects and will continue with the second part of the program —a sampling of all commercial frozen eggs — until these products are brought into compliance.

Honegger Dealers Hold Carload Sale

FAIRBURY, ILL.—Ohio Honegger Big "H" feed dealers have staged a carload hog feeding supplement sale. Many Ohio dealers went together to buy hog supplements in carload lots, according to Honeggers' & Co., Inc.

The dealers reportedly found this kind of promotion a valuable service to their customers since they were able to offer feeds at "direct off the car" saving to their customers to help produce more economical pork.

New Butler Stor-O-Matic tank

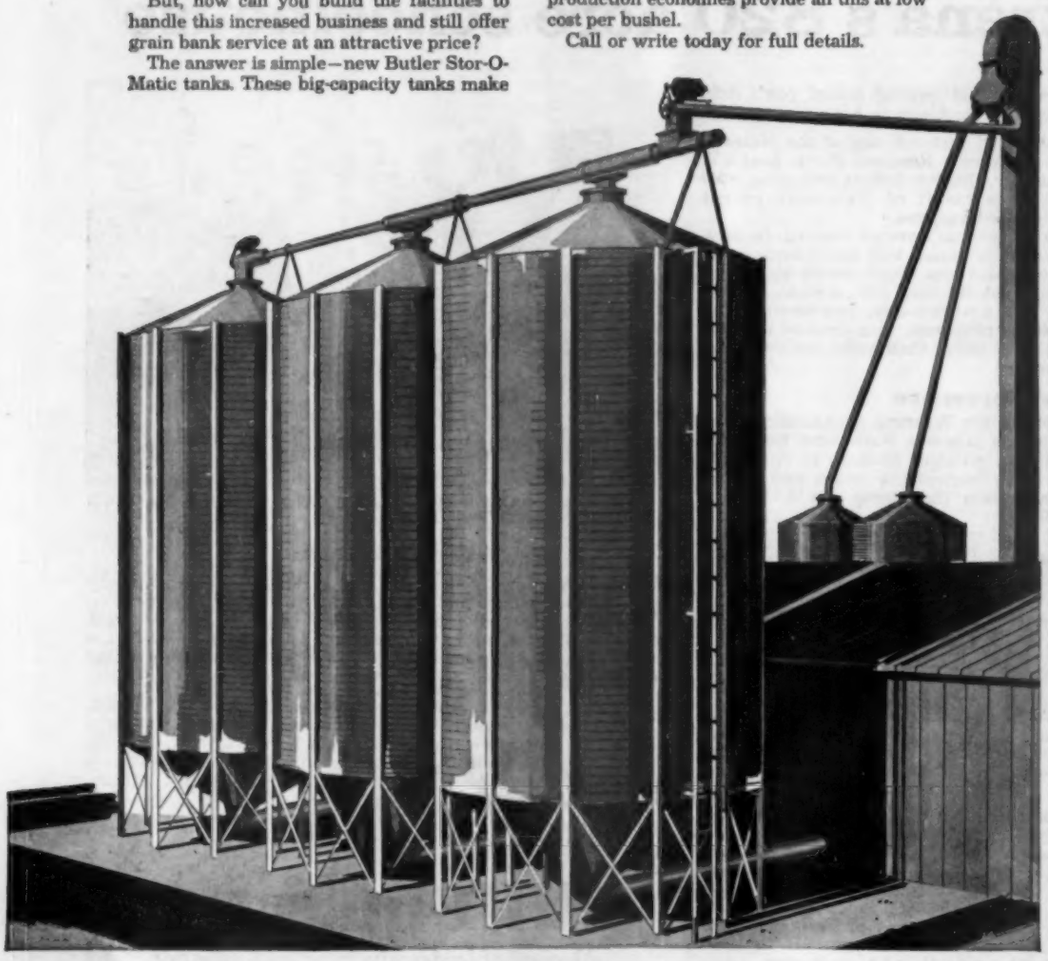
The low-cost way to start your own profitable grain bank

Profitable for everyone, the grain bank idea is sweeping the country. Feeders save the time-consuming job of mixing feeds . . . the cost of installing mixing facilities. Feed merchandisers are assured a steady volume of mixing and concentrate business and can meet the competition of on-farm mixing.

But, how can you build the facilities to handle this increased business and still offer grain bank service at an attractive price?

The answer is simple—new Butler Stor-O-Matic tanks. These big-capacity tanks make segregating grain by grade and types easy. Hopper bottoms and optional discharge augers provide fast, economical grain handling. Weather- and vermin-tight steel construction assures safest storage. Expansion is fast and economical—just add more tanks as your grain bank business grows. And Butler mass production economies provide all this at low cost per bushel.

Call or write today for full details.



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Ralph says, There is still time to start

See page 41

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HYGROMIX IS THE ONLY WORM CONTROL METHOD THAT STOPS SWINE WORM REPRODUCTION. BY CONTINUOUSLY KILLING WORMS *BEFORE* THEY CAN LAY NEW EGGS, HYGROMIX STRANGLES THE SOURCE OF THE WORM PROBLEM.

Proof that Hygromix stops worm-egg production...*and why this is important*

One of the biggest advantages to the use of Hygromix feeds is the fact that Hygromix stops worm-egg production of the large roundworm, nodular worm, and whipworm. Since the female roundworm, alone, is capable of laying up to 1,400,000 eggs daily, reducing the source of reinfestation is the best way to control swine worm damage.

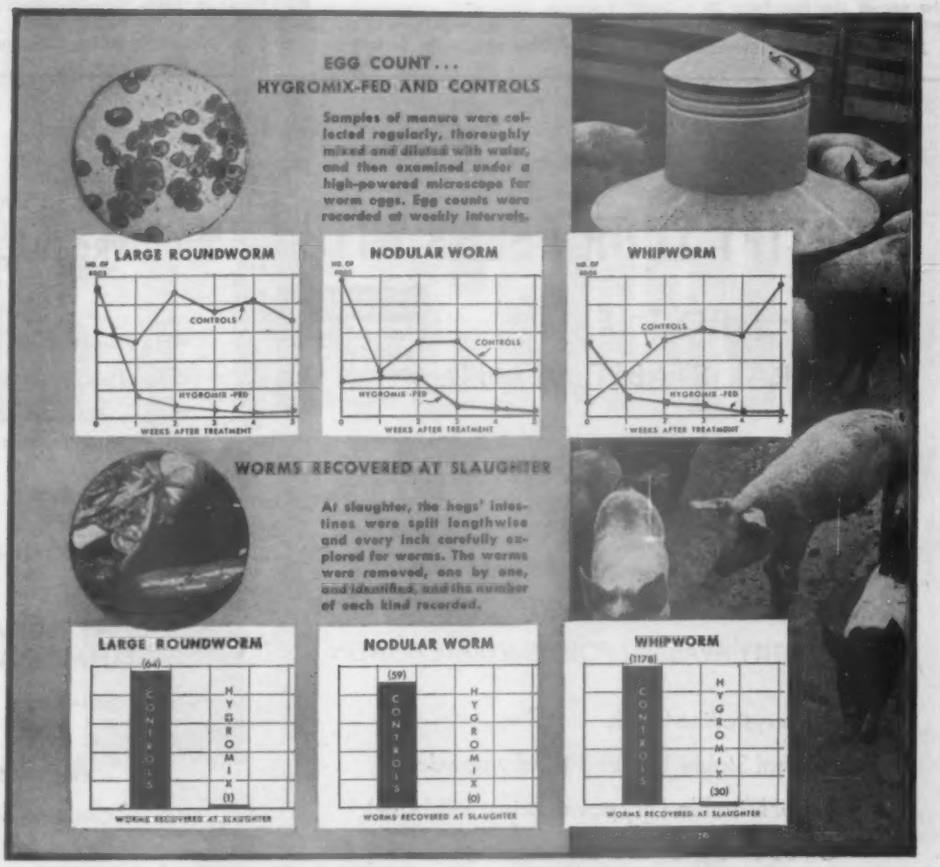
Hygromix is the *only* worm control method that stops this problem at the source . . . before the hidden damage is done. Purge-type wormers act too late to control this continuous cycle of reproduction. Hygromix breaks the life cycles of the three swine worms at two points. It kills adult worms already present in the hog, and stops their egg production . . . and it kills new baby worms as they enter the intestinal tract . . . before they grow to egg-laying maturity. And, since Hygromix is in the feed, it protects the hog day after day.

These charts prove Hygromix stops worm reproduction

On the right is a summary of the results of experiments which were made to test Hygromix's ability to stop swine worm reproduction. Pigs from worm-infested herds were divided into equal groups. One group (called the "control" group) was fed a high-quality swine ration without Hygromix. The other group was fed the same ration *with* Hygromix.

With high-powered microscopes, regular worm-egg counts were made throughout the tests. Notice that egg production was cut practically to nothing within three weeks. As a final check, all pigs were slaughtered at the end of the tests, and any worms present were carefully hand-counted.

These experiments firmly proved that Hygromix feeds do two things no other worm control method can do: *Hygromix kills more kinds of worms . . . large roundworms, nodular worms, and whipworms. Hygromix stops swine worm reproduction.*



HERE'S WHAT COLLEGE RESEARCHERS HAVE TO SAY ABOUT HYGROMIX'S ABILITY TO STOP SWINE WORM REPRODUCTION:

Many state colleges have conducted tests to determine the effect of Hygromix-fortified feeds. Here are a few excerpts taken from their summary of findings:

Hygromycin effectively controlled roundworms, nodular worms, and whipworms, as shown by ova counts taken and by worm counts obtained at slaughter.

Purdue Swine Day—Mimeo A.S. 242, August, 1958

Hygromycin B is highly effective and more nearly meets the requirements of an ideal wormer than any of the former compounds.

"Worm Eggs Cost You Money"—University of Nebraska, E.C. 1902

Feeding of hygromycin B to sows during gestation lowered the reservoir of *Ascaris* eggs from 555 per gram of feces in the untreated sows to 2 eggs per gram in those treated.

Nebraska Rooters Day Swine Progress Report 370—Summer, 1958

The reduction in the number of ascaris (roundworm) and nodular worm ova in the treated groups would indicate that this feed additive (Hygromix) is very effective in the elimination of these internal parasites of swine.

Ohio State Swine Day, 1957—Animal Science Mimeo 106

Hygromycin hits harder than other drugs. The new drug gets whipworms, which no other drug has been able to touch. It acts partly by blocking reproduction of the parasites . . . an ideal way to stop the worms before they do the damage.

Press Release—University of Wisconsin, December 16, 1957

Hygromycin controlled roundworms effectively, as there were no roundworm ova present in the feces of any pigs receiving either hygromycin or the combination of hygromycin and chlorotetracycline.

South Dakota Swine Field Day—September 11, 1958

Hygromycin was effective in reducing the roundworm egg count.

"The value of various antibiotics for growing fattening swine"—Missouri Swine Day, September 5, 1958

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THE TELEPHONE: Valuable Sales Tool

By AL P. NELSON
Feedstuffs Special Writer

The telephone has proved itself a valuable business tool for many years and there are indications that some feed salesmen working for retail dealers are using it quite a bit nowadays to reach their prospects and customers and make more sales.

On the other hand, on a trip the writer recently made to seven mid-western states, he found that some salesmen preferred a personal visit to the use of the telephone as a major selling tool.

For those who are interested in the subject, here is a rundown of the reasons for and against extensive use of the telephone in the retail selling of feed.

Advantages

Advocates of greater use of the phone in selling say:

1. The salesman can keep in touch with farmers more often through the use of the phone. Practically every farmer today has one or two telephones, often with an extension in the dairy barn or somewhere in the farm yard. This means the farmer can be reached by phone rather quickly many seasons of the year.

2. The feed salesman can very wisely time his calls seasonally so as not to call the farmer from his work at some distance to answer a phone call. For example, during the busy spring and summer season, say salesmen, it is wise to call the farmer during noon hour, or about six in the evening when he has finished eating the evening meal, or before nine o'clock, the farmer's bedtime. These are the times the farmer is likely to be in the house.

In the fall and winter, one can phone almost any hour of the day and catch the farmer in, or at least close to home. Farmers are used to answering phones and buy a lot of merchandise over the phone. They can be sold more feed that way, too.

3. Selling specials by phone. Every feed dealer has some special feed and other farm supply bargain which needs to be called to the attention of farmers quickly. This can be done via the phone. In this way farmers will buy extra merchandise which they otherwise might overlook.

4. Cost of selling via phone. It is much cheaper than selling through a personal visit. Rural telephone zones, for instance, extend quite far. Sometimes 5 to 10 miles. This means that on most trade area calls there are no extra charges for telephone calls made for sales purposes.

The personal telephone call is a much more intimate way of selling than by direct mail or other printed means. You can give the farmer a lot of information in a few minutes and also learn rather quickly what his objections are—if any—to buying the merchandise. Direct mail advertising, for instance, does not have such quick exchange features. Dealers often do not know why direct mail pieces do not pull—from certain farmers. Using a phone, you are told by the farmer why he does not intend to buy.

5. "I can trace many a sale of a ton or more of feed to the phone," one dealer said. "It's better than an extra employee. I try to set aside a couple nights per week to make telephone calls to key farmers I cannot visit for one reason or another. Often I make 20-30 such calls a week. And I get extra business.

6. Good telephone techniques can quickly be learned. Dealers and their salesmen who use the telephone a great deal in sales work can learn telephone techniques easily.

Experience teaches them that the phone conversation must be personal to some extent. It pays to ask a farmer about his health and that of his family, how they are getting along, etc. Then, following such precedure, the salesman can launch into a selling presentation, if he wishes.

To start a phone conversation by telling a farmer you have a special buy for him in feeds is not lowering the natural barrier between seller and buyer. The personal relationship must always be stressed. The farmer acts slowly, as a rule. He needs to be warmed up. He's suspicious of friend or foe who tries to rush him.

Also the salesman is learning that to use the telephone to sell, he needs to speak slowly and distinctly. He must pronounce his words properly, so the farmer can understand what he is saying. And, he should present only one sales proposition at a time and get an answer on that before he proceeds to another. Let the farmer mentally digest one thought at a time.

Telephone selling in the feed business consists of making the farmer feel the salesman has a special bargain just for him, and that he is calling him to tell him about it.

Disadvantages

Those who do not regard telephone selling as a substitute for other types of selling in the feed business, say the following:

1. The personal type of selling produces more sales per call. Use the telephone only to reach a farmer you could not reach on a personal visit, for one reason or another. There is no substitute for face-to-face selling. A salesman talking to a farmer in his house, yard, barn or feedlot knows exactly what feeding conditions are like in this instance and he can size up the change of expression in the

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farmer's face as the conversation proceeds.

2. The farmer likes to visit before he buys. Over the telephone this is not possible, for the salesman is often pressed for time and is anxious to close the deal and get to the next phone call. The farmer does not wish to buy in a hurry. He wants time to think things over. This he cannot do so easily over the telephone.

3. The lazy way to sell. Selling by telephone is effective in some ways, but it is really the lazy way to sell a product which may result in a sale of $50-$500 or even $1,000 on big orders. The salesman who gets accustomed to phoning customers to try to sell feed, may rely more and more on this type of selling, and thus be missing greater potential sales on each farm.

Such salesmen may get to the point where it's much easier to reach for the phone to talk to a certain farmer than it is to spend an hour driving to his distant farm for a man-to-man conference and inspection of herds and flocks.

4. The word "no" is an important one in selling. Those in favor of man-to-man selling believe that it is much easier for a farmer to say "no" to a feed salesman over the phone than it is to a salesman who stands talking to him face-to-face on the farm.

Time to overcome obstacles is very limited over the phone, but often the field salesman has almost unlimited time to convince a prospect on his own premises, especially in cold months when farmers have much free time.

5. Farmers want personal attention. Farmers like to have salesmen visit them on the farm. Standing on his own land, the farmer feels more important, more secure than when he visits the dealer's place of business. The salesman who calls on a farmer is showing that farmer personal attention and that is what the farmer wants along with quality feed and service. Such attention makes him feel that his feed business is important to some salesman. One cannot give this same personal attention to a farmer with a telephone call.

6. Telephone has a use. There are certain times when the telephone is very important in communicating with customers, but it is a secondary means of contacting the farmer for the purpose of making sales.

On my trip I did find that there are more dealers turning to more extensive use of the telephone than ever before. As one dealer put it, 'Farmers are businessmen nowadays. They have to transact much of their business via the telephone. They cannot waste their valuable time coming to town for every little thing they need. They know that there are many sales and service features which can be handled by phone. Thus each year farmers are becoming more accustomed to buying merchandise by phone. I think this means a greater use of the phone in selling from now on. Within limits, you can't beat the phone as a sales instrument. It's on duty 24 hours a day for those who can use it wisely.

But be sure to wear out plenty of shoe leather, too. There is no reason why any feed man can't balance his selling program between personal visits to customers and selling by phone when necessary.

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Suggest Minnesota brand to your feed customers and you'll do them more than a favor. You can *help boost their income*. And, their gain is your gain!

There's a QUALITY DIFFERENCE!

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Ralph
has 10 phones.
But don't all call at once, please
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See page 41

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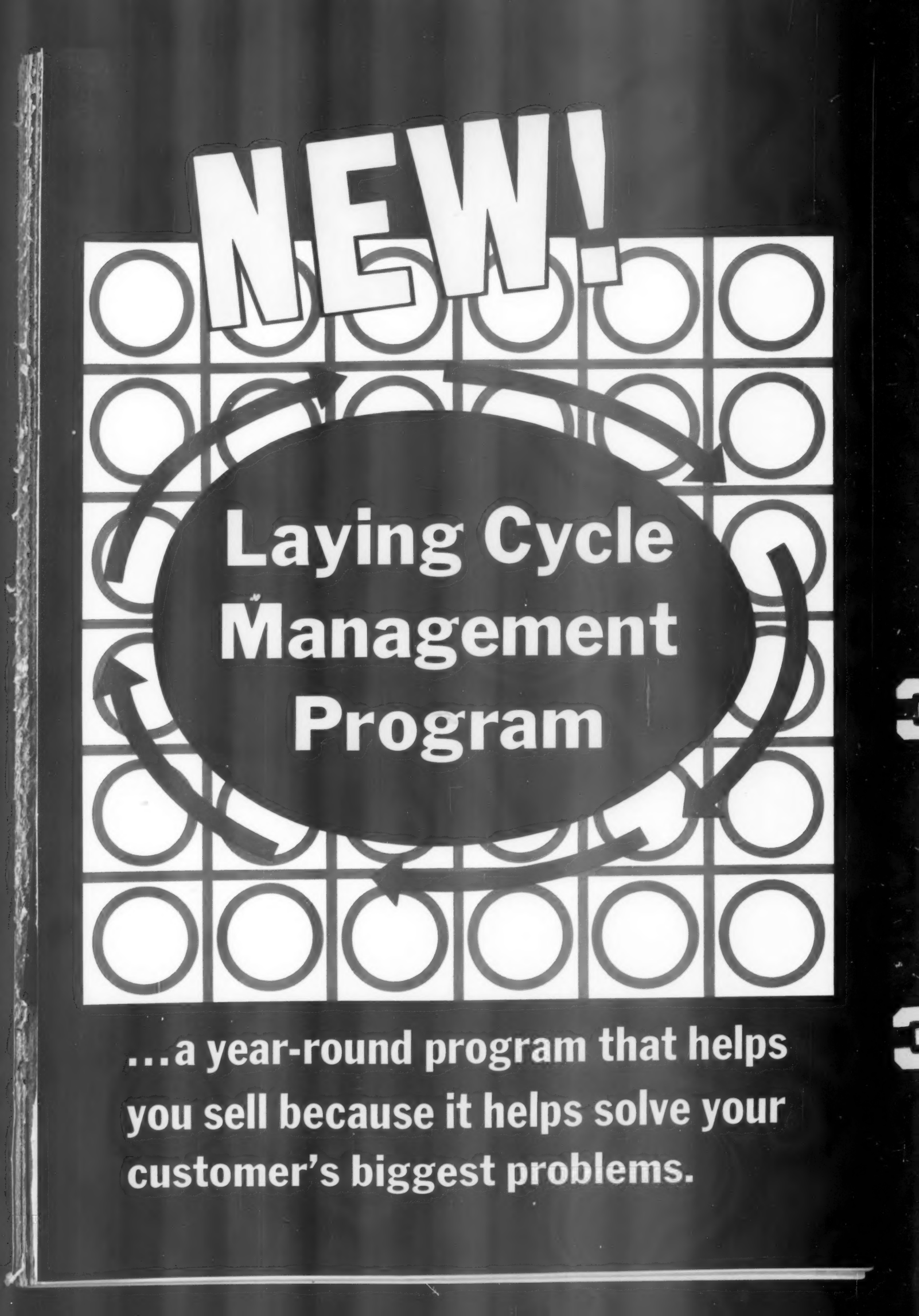

NEW!
Laying Cycle Management Program
...a year-round program that helps you sell because it helps solve your customer's biggest problems.

Here's the complete program

and here—in a nutshell—is how it works for you and your customers

Pfizer's

the stress-rating way to extra production...

Happy, healthy hens fill an egg case faster . . . and cheaper.

Anything that makes them less happy or less healthy is stress.

Stress can keep them from their full production potential.

It causes egg slumps and early molts. In its most severe form it can result in culls, or mortality.

And in any form it can be expensive. The reason: stress is only the trigger than can start real trouble because . . .

Egg slumps last longer than the stress that causes them

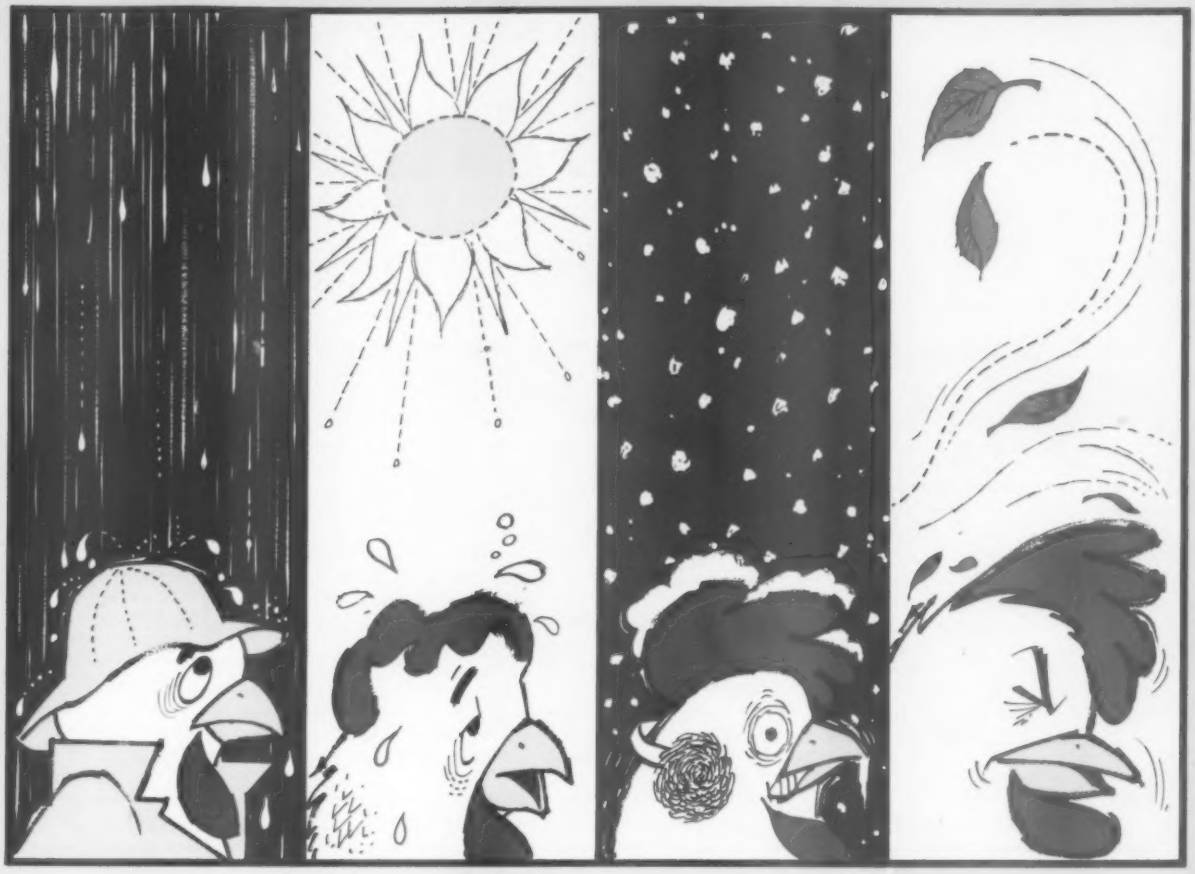
HERE'S WHY:

Stress sets up a chain reaction
It shocks birds
The shock weakens birds
Weakened birds have lower resistance
Disease organisms grab hold

You can stop that chain reaction by . . .

- Removing or relieving the stress that hits birds.
- Giving the birds potent protection of Terramycin® in an Extra-Production Laying Feed program.

Terramycin has shown its ability to help maintain normal egg production and improve feed efficiency when fed at low levels. At times of high stress or of disease, high levels of Terramycin give potent help in clearing up many of the conditions that slow down egg production. You'll find a complete explanation of how and why this happens on later pages.



How to tailor the LAYING CYCLE PROGRAM to your flock

First, develop a Stress Rating for your own flock.

What is a Stress Rating?

It is the total of all the egg-robbing stresses working against your flock.

This rating can vary from one flock to the next . . . even vary within a single flock from one week to the next . . . and range from low to high. That's why a stress rating can be an important guide to flock management.

A week-to-week check of the stress level of your flock . . . compared with egg production records for the same period . . . will supply a valuable guide to flock-management methods. The rating also will give you a means of pinpointing potential problems and learning how to handle your most serious egg-robbing conditions.

On the next page, there is a list of common stresses. Check them against your flock.

The level of one stress may be high or low depending on your individual conditions. Take that factor into consideration when making your stress rating.

The chance of any one stress striking will vary in frequency . . . so rate them accordingly.

And you may have several stresses hitting together —so rate each one. You may also have stresses other than those listed. Mark this rating in the section "Other stresses you have noticed in your flock."

When you have filled in the stress rating chart, you'll have a good guide for planning your management program for the entire laying cycle.

From your experience, mark them according to how often they're likely to hit. Then total up the rating for your flock. Chances are, you'll be surprised what a problem stress may be, no matter how good your management.

STRESS-RAT

Mark the stresses you have or can expect to hit your

Stress and description	YOUR FLOCK Chance of stress hitting		
	Seldom	Occasionally	Often
Establishment of the peck order. Until a pullet finds her place in the hen society, she's in trouble. And you can see why hens that end up at the bottom of the peck order don't have much chance if there's not enough feed or watering space.			
Competition at the feeders. Every hen needs 6 inches of feeder space.			
Competition at the waterers. You need a minimum of eight linear feet of trough-type waterer for every 100 birds.			
Poor nutrition. Are you using a balanced feeding program? Unless proteins, vitamins, minerals, energy, nutrients, etc. are balanced right, birds' production will suffer. That's why you should use a high-quality laying mash.			
Depletion of body reserves. Highly-bred layers will rob their bodies to continue laying. To maintain egg production and to keep layers in good condition, a well balanced feeding program is essential.			
Unsanitary housing conditions. Unsanitary conditions lead to parasites and germ buildup.			
Disease outbreaks. Disease can affect egg production overnight . . . and kill birds.			
Low-level infections. The most dangerous stress of all because you can't see them and can't pinpoint your problem. Low-level infections may keep hens from ever reaching their peak production. Low-level infections are the prime source for disease outbreaks, too.			
Parasites—Worms, lice and mites. Bad for production themselves, parasites lead the way to other stresses which lead to disease.			
Extremes in temperature. Any temperature below 45° and above 75° can complicate your problems.			
Dehydration. Birds need a constant supply of water. Water intake may be below optimum if water is too cold, frozen, too hot or dirty.			
Sudden temperature or humidity changes. Good house insulation and ventilation do a great deal to overcome this stress. Wet litter, drafts, etc., are especially bad.			
Moving flock to a new location. Keep the stress of moving pullets to the laying house at minimum to avoid setbacks.			
Vaccination. The shock of vaccination can play havoc with production rates.			
Indigestion. Moldy feed or polluted water is a severe stress.			
SUBTOTAL			

TING CHART

flock. ☑ Then add up the rating for your flock.

Stress and description	YOUR FLOCK Chance of stress hitting		
	Seldom	Occasionally	Often
Rats—They can range from minor to severe problems in the flock.			
Flies—At certain seasons of the year, flies can create disease hazards.			
Predators—Take steps to see that foxes and other predators are kept from the laying flock.			
Some medications. Some medications such as worming treatment, certain coccidiostats, etc., may cause slight to severe stress. Antibiotics even when used continuously do not cause stress.			
Faulty ventilation. Good ventilation-without drafts-in winter, cross ventilation in summer are essential.			
Sudden changes in routine. Any sudden change in habits upsets layers and they show it by egg slumps.			
Lack of flock uniformity. Birds of different size and age should not be kept together.			
Injury. A bird's system has to work overtime to repair cuts or bruises . . . effort that's taken away from production.			
Handling the Flock. One stress you can't avoid if you have to handle birds.			
Debeaking. A stress usually included at housing time.			
Disturbances. Loud noises, banging doors, strangers in the laying house—they'll all upset birds.			
Other stresses you have noticed in your flock			
SUBTOTAL			
GRAND TOTAL			

How does the LAYING CYCLE PROGRAM attack stress-caused problems?

It counts on good management

Good basic care, management and sanitation can't be bought in any store. It's the most important step toward eliminating stress that develops within any operation . . . the best way possible to prevent outside stress from sneaking in.

REMEMBER: *The better the management, the less the stress. And the fewer the stress problems . . . the better the egg production (and the bigger your egg check, too).*

It's built on the fact that *every* flock is *always* facing some stress

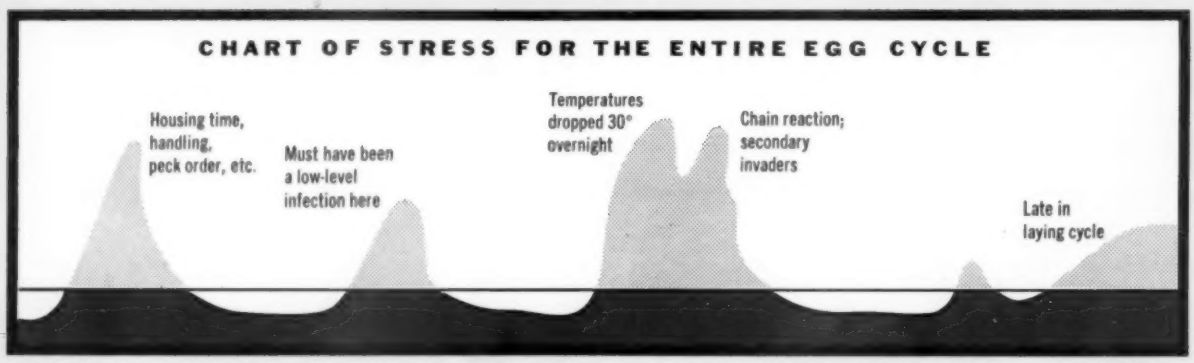


CHART OF STRESS FOR THE ENTIRE EGG CYCLE
Housing time, handling, peck order, etc.
Must have been a low-level infection here
Temperatures dropped 30° overnight
Chain reaction; secondary invaders
Late in laying cycle
FIRST EGGS
END OF CYCLE

HERE'S HOW A TYPICAL STRESS PATTERN LOOKS

■ Extra-Production Laying Feed with low levels of Terramycin

▨ Laying Feed with high levels of Terramycin

Your flock's stress pattern may look much different from this. The important thing is that during periods of extra stress you switch to a laying feed with higher levels of Terramycin for extra protection.

To see what stress can do to egg production, turn book upside down. Valleys caused by stress could be egg slumps. The trouble is, slumps often last longer than the stress that caused them.

No matter how good your management, you're still going to have some stress. And when stress hits, disease or production-robbing organisms can creep in.

Even under ideal conditions such as those found at university experiment stations, low levels of Terramycin have been found to increase egg production and feed efficiency.

That's why Extra-Production Laying Feeds with low levels of Terramycin more than pay their way when used continuously throughout the laying period.

It gives powerful action when you need it

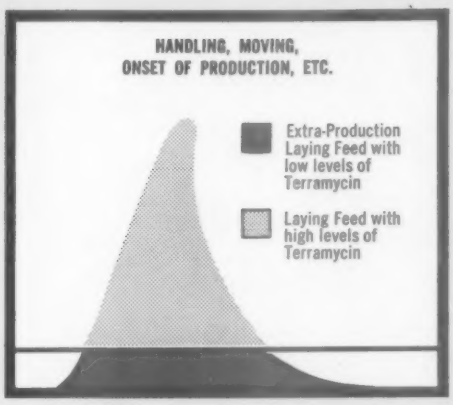
The Laying Cycle Program gives you a powerful weapon to attack the chain reaction set up by stress. Your attack force is high levels of Terramycin in Extra-Production Laying Feeds at three important times in the egg-production period:

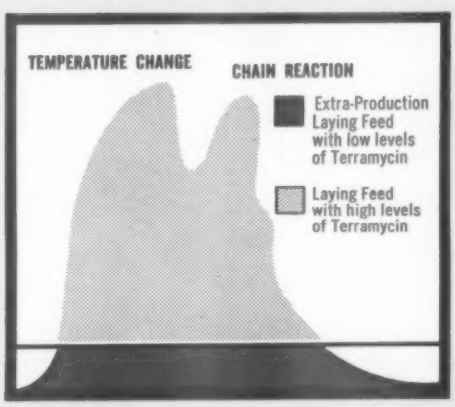
PULLET HOUSING TIME

Pullets are faced with an extra-heavy stress load—enough stress to even make older fully-developed birds quit laying:

Finding their place in the peck order
Moving to the laying house
Debeaking
Onset of production
Handling
Many other stresses (including germs) always present

That's the urgent reason for using HIGH levels of Terramycin in laying feed the first month of production. You'll help birds reach peak production sooner . . . help overcome stresses caused by low-level infections that Terramycin can control. Use Extra-Production Laying Feeds with high levels of Terramycin and you'll be giving your birds a running start for the rest of the laying cycle.


HANDLING, MOVING,
ONSET OF PRODUCTION, ETC.
Extra-Production Laying Feed with low levels of Terramycin
Laying Feed with high levels of Terramycin


TEMPERATURE CHANGE
CHAIN REACTION
Extra-Production Laying Feed with low levels of Terramycin
Laying Feed with high levels of Terramycin

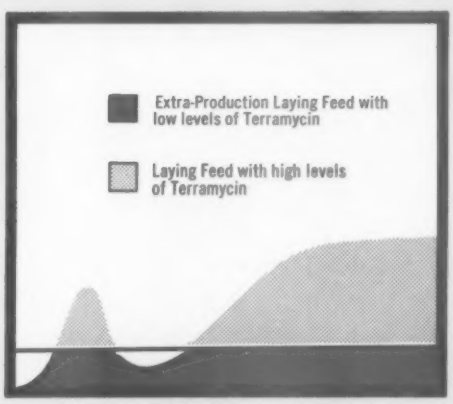
TIMES OF EXTRA-HEAVY STRESS OR DISEASE

High levels of Terramycin help birds keep producing in the face of extra-heavy stresses because they help keep many secondary invaders—and important poultry diseases—from attacking when birds' resistance is down. High-level feeds are the blitz against that stress or chain reaction. Use them:

Before, during, after predictable stresses
When unexpected stress hits
At the first sign of a slump
At the first suspicion of disease

LATE IN THE LAYING CYCLE

Birds have been hit by stresses during the entire production period. That's why during the last month of the laying cycle you should use feeds with higher levels of Terramycin to help birds lay at higher rates longer.



Why you should use Terramycin® specifically

BRAND OF OXYTETRACYCLINE

It's the broad-spectrum antibiotic, effective against a wide range of disease organisms that affect chickens.

That wide range of action gives you the best chance of hitting more of the types of germs present in your laying house at all times.

It's part of the reason why low-level Terramycin in Extra-Production Laying Feeds helps hens lay more and lower cost eggs throughout the entire laying period. Terramycin has also been shown to increase the vitamin content of eggs. A recent study at the University of New Hampshire, for example, showed that low levels of Terramycin in the ration increased the content of four vitamins in the egg yolk by an average of 20 to 37 percent over a five-month period.

It's why Terramycin is such potent help at times of low-level infections.

It's why—at times of extra stress when birds are highly vulnerable to disease—you get such swift help in preventing outbreaks.

Terramycin is no cure-all...

But no drug or antibiotic has yet been discovered that hits more disease-producing organisms than Terramycin.

For instance, Terramycin helps prevent and treat CRD, a major layer disease problem. It is effective against Bluecomb, (Non-Specific Enteritis) and Synovitis as well as other bacterial infections associated with stress and primary diseases.

And Terramycin in high-level feeds is your best supportive therapy whenever *any disease* hits. It helps you break the chain reaction of troubles—fight off mixed bacterial infections and certain other diseases like CRD which can flare up and get a foothold in disease-weakened birds. Often these secondary onslaughts are more costly than the original outbreak.

Hits both types of bacteria

Terramycin hits both types of bacteria, the gram-negative and gram-positive. Many other drugs hit only one type or the other.

Other diseases, too

In addition to the organisms commonly controlled by antibiotics, Terramycin has the ability to control certain large viruses and other organisms known as spirochetes and rickettsia.

Won't harm animals

Terramycin is free from irritants . . . does not create stress, and—has no undesirable side effects and will not throw birds off feed when used as directed.

Outstanding record of safety

It has been found completely safe to use with any layers . . . any time . . . all the time. Terramycin will not depress egg production—even when given to hens at recommended high levels.

How to get started...

The only way you can see how well the Terramycin Laying Cycle Program works for you and how much it lowers egg production costs per dozen is to try it.

Start by figuring your flock's STRESS RATING . . . then see your feed supplier for more details on his brand of . . .

. . . Extra-Production Laying Feeds with Terramycin for extra eggs at lower costs during low stress periods and

. . . High-Level Feeds with Terramycin for potent extra help at times of heavy stress.

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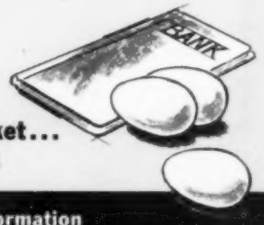


Let the Terramycin Laying Cycle Program put more eggs in your basket... ...more money in the bank

Send coupon for more information

Chas. Pfizer & Co., Inc.
Agricultural Sales Division, Dept. 12
800 Second Avenue
New York 17, N.Y.

Gentlemen:
Please send information on items checked:

- ☐ Disease control for layers
- ☐ Control of CRD in layers
- ☐ Have representative call
- ☐ Lower cost egg production with Terramycin
- ☐ Increased vitamin content of eggs with Terramycin

Name_____

Address_____

City_____ State_____

No. of birds in laying flock_____

The Laying Cycle Management Program helps flockowners tailor your laying feeds to their own conditions based on the stresses they have or can expect to have during the laying cycle. It outlines major stresses . . . tells how stresses cut egg production . . . shows how your feeds with Terramycin* help fight stress-caused slumps to restore peak production again.

Your key sales point is:

Every Flock Always Has Some Stress—No Matter How Good the Management

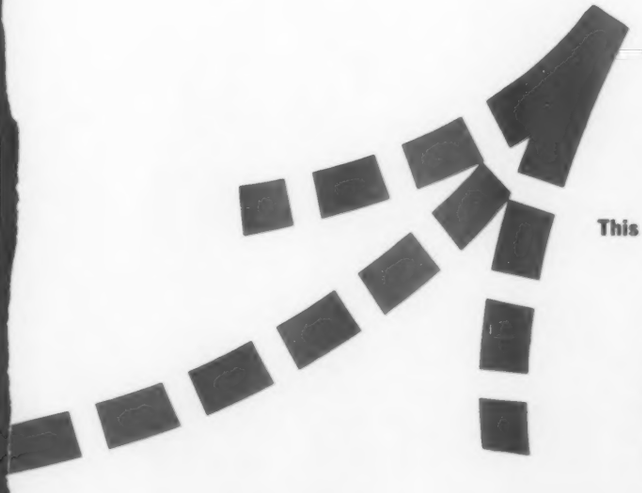
That's why birds need the help of your Extra-Production Laying Feeds throughout the laying cycle.

—During most of the laying period a regular Extra-Production Laying Feed with low levels of Terramycin will help increase egg production and improve feed efficiency.

—At times of severe stress, Terramycin at high levels in laying feeds will give extra protection against buildup of many disease organisms which rob egg production and cause disease outbreaks.

Use this Laying Cycle Management Program to sell your feeding programs. It supplies an ideal opportunity for you and your men to talk feeding and management programs during the entire production period. And its principles apply to laying conditions in every part of the country, at any time of the year, with any type of layers, and for every age of hen . . . from pullet housing to stew pot.

*Reg. trademark for oxytetracycline



This 8-page booklet . . .

. . . will be received by over 400,000 poultrymen . . . customers for your laying feeds and laying feed programs.

The complete Laying Cycle Management Program will appear in *Poultry Tribune*. Other leading poultry magazines will carry coupons flockowners can mail in for the complete program. In addition, over 3,000,000 readers of *Farm Journal* will receive couponed ads so they can get the complete programs, too.

There's hardly a laying-flock owner in the country who won't be exposed to the Laying Cycle Management Program . . . it'll pay you to be ready with your laying feeds containing Terramycin.

We're helping you sell your customers this way:

Your customers will get this 8-page Laying Cycle Management Booklet in the leading poultry magazines.

They can develop their own flock's stress rating.

Each flockowner can count up the stresses at work on his birds and lets him rate them according to how often they're likely to hit.

Working from his own stress chart, he can develop the program with your laying feeds that works best for him:

- At pullet housing time . . . a period of extra stress, he'll need a laying feed with higher levels of Terramycin to help birds reach peak production sooner.
- During most of the production period, he'll need a regular Extra-Production Laying Feed with low levels of Terramycin to give him extra eggs and save feed at the same time—the low-cost way with Terramycin's help to cut total production costs by 1¢ to 6¢ a dozen.
- At the end of the laying cycle, he'll need feeds with higher levels of Terramycin to help birds lay at higher rates longer.
- At times of extra stress or disease, he'll need high-level Terramycin to fight the primary diseases which Terramycin controls, and fight off many bacterial infections which can attack when birds' resistance is down.

It's timed to catch your customers at the heavy pullet housing time . . . and give you an opportunity to sell new customers your brand of Extra-Production Laying Feeds with Terramycin.

Here's a program with all the earmarks of a real selling tool. It's basic . . . it's modern . . . and it's practical. With your support and activity, it will turn into a real selling vehicle for your laying feeds.

It's a program that can be big or small for you, depending on how you get behind and promote it. Unless you do, you're losing the opportunity for the best results.

Ask your Pfizer representative how you can tie in for the most profit. It's all a part of our plan of–

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Time of Year Affects Marketings, Prices, Production Costs on Broilers

BLACKSBURG, VA.—The time of the year has a lot to do with marketings, prices, and production costs of commercial broilers in the Shenandoah Valley area of Virginia and West Virginia.

A recent five-year study in a 10-county area, conducted by the Virginia Agricultural Experiment Station at Virginia Polytechnic Institute here, showed that broiler placements are 12-18% above average from the last week in February through April. In the fall, placements are 12-34% below average for the year from the first week in September through October.

Placements in the Shenandoah Valley area show wider variations than in the 13 states with major broiler areas. These more pronounced swings in placements are reflected in the marketing patterns, which show a seasonal high (12-23% above average) from May through the third week of July and a low (18-35% below average) from December through the second week of January.

Followed Pattern

The farm price of broilers in the area followed a distinctive pattern during the period studied. Prices received for broilers sold from the last week in January through the second week of April were 2-8% above average for the year. During July, August, and through the third week of September, broiler prices typically are 4-8% above average. Prices remain 5-15% below average during the entire fourth quarter of the year.

The amount of cash it takes to produce broilers also varies according to the time of the year. Lowest cash production cost is experienced with flocks started from the fourth week in March through the last week in August. Highest cash production costs are found with birds started during October, November and December.

The researchers also noted seasonal differences in the broiler-feed conversion ratio, in the percentage of broiler chicks started that are sold and in the age and weight of broilers sold. Poorest feed conversion ratios are seen with birds started from the third week in August through the third week in December. The best feed conversion ratios are achieved with birds started during April and May. Variations in the feed conversion ratio explain 79% of the variations in the total cash production cost of broilers.

Only 11% of the variation in broiler prices was associated with variations in the marketings of broilers in the Shenandoah area. Marketings of broilers in 13 states with major broiler areas had a larger effect on the farm price in the Shenandoah but factors other than market supply account for most of the variation in farm prices.

The most profitable flocks of broilers are started from the second week of March through the third week of July and from the last week in December up to the first week of February. The last two weeks of September and the first two weeks of October are the least favorable during the year to start broilers, the study concluded.

Complete results of the study are now available in Technical Bulletin 147, "Seasonality of Marketings, Prices and Total Cash Costs of Broilers," published by the Virginia Agricultural Experiment Station, VPI, Blacksburg.

E. W. Beardsley T. A. Bruce

Corn Products Sales Gives Two Promotions

NEW YORK—Corn Products Sales Co. has announced the promotion of two long-time employees.

Edward W. Beardsley has been appointed southern regional vice president of the industrial division, Corn Products Sales Co., Harold Plimpton, executive vice president, has announced. In his new post, with headquarters in Atlanta, Ga., Mr. Beardsley succeeds Fred C. Hassman, who becomes southern regional vice president of the Best Foods division of Corn Products.

Mr. Beardsley joined Corn Products in 1935. He has a background of both technical and sales experience in the company's industrial products. He moves to Atlanta from the west coast where he was assistant western regional manager.

Mr. Beardsley attended the University of Illinois and holds a degree of bachelor of science in chemistry from Bradley University.

Thomas A. Bruce has been appointed assistant western regional manager of the industrial division, Corn Products Sales Co., J. E. Walz, western regional vice president, has announced.

Mr. Bruce has been associated with Corn Products for over 40 years. For the past several years he has been located in New York in administrative positions in sales of the company's industrial products.

In moving to the west coast to take up his new post, Mr. Bruce returns to a section of the country where he is well known. He brings to this position previous experience as technical sales representative in California, Oregon and Washington.

He is a graduate of Bradley University.

Frozen French Toast Popular in Tryouts

ITHACA, N.Y.—Cornell University agricultural scientists report that frozen French toast, a convenience food they developed recently, has been so popular in initial tryouts that market tests previously scheduled for Syracuse and Auburn won't be necessary.

Developed by a team of researchers from the departments of agricultural economics and poultry husbandry, the instant product is designed to help boost egg sales and improve the breakfast menus of millions of Americans.

Tryouts in three Ithaca supermarkets definitely established the toast's popularity, in the opinion of Cornell researchers, with a total sales of more than 5,000 boxes in 12 weeks. At four slices of toast per package, this means more than 200 eggs were sold in French toast form. Each slice includes a half egg.

A report to be issued by the New York State College of Agriculture research team states that frozen French toast can be commercially produced and marketed at a price that is "reasonably competitive" with the cost of making it at home. "Assuming that this frozen French toast could be produced and distributed on a national basis and that the use of the product to a large extent represents additional egg consumption, frozen French toast could be a substantial outlet for eggs," the report says.

In the Ithaca market tests, the biggest boom in sales occurred during the first week while the product was being actively promoted. Sales eventually levelled off to a total of 200 boxes a week for all three stores.

POULTRY VACCINE PLANT—The formal dedication of a new poultry vaccine plant was held recently in Opelika, Ala., by Dorn and Mitchell Laboratories. Those participating in the dedication include, from left: Robert S. Whiteside, president of Sterwin Chemicals, Inc., an affiliate of Dorn and Mitchell; Dr. Ralph Brown Draughon, president of Auburn University; Dr. S. A. Edgar, poultry pathologist, Auburn University; Ira Dorn, president of Dorn and Mitchell, and Dr. M. L. Tainter, director of the Sterling-Winthrop Research Institute in New York.

New Poultry Vaccine Plant Is Dedicated By Dorn and Mitchell

OPELIKA, ALA.—With representatives of the southeastern poultry and feed industry looking on, the formal dedication of a new poultry vaccine plant was held here recently by Dorn and Mitchell Laboratories, Inc., a subsidiary of Sterling Drug, Inc. The new plant will manufacture CocciVac, the vaccine in use for immunization of chickens against coccidiosis.

Principal speaker at the ceremony was Dr. Ralph B. Draughon, president of Auburn University, who spoke on the contribution being made by educational institutions to industry progress.

Dr. S. A. Edgar, professor and poultry pathologist at Auburn University, who is responsible for the development of CocciVac, traced the background of the vaccine's discovery.

The increasingly vital role being played by research in the plans of industry was discussed by Dr. M. L. Tainter, vice president of Sterling Drug and director of the Sterling-Winthrop Research Institute.

Ira Dorn, president of the company, was in charge of the dedication ceremony. At the conclusion of the program, guests were taken on an inspection tour of the plant. A chicken barbecue lunch was served to the entire audience.

The new plant is located on a 140-acre site. It consists of nine buildings, including administrative offices, a main laboratory, production, sterilization and equipment buildings, as well as a separate diagnostic laboratory.

All principal buildings are air-conditioned. Poultry research facilities, ranging in size from laboratory-scale batteries to housing adequate for commercial size flocks, are located on a farm some distance from the vaccine plant.

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See page 41

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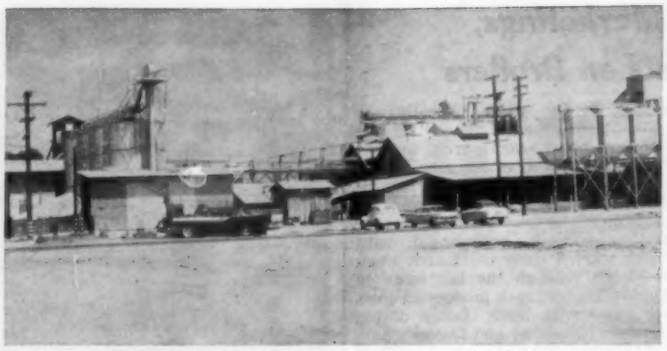
City.....Zone.....State.....



CALIFORNIA FEED MILL—Exterior view of the mill catering to dairymen is shown above. The firm also maintains a staff of fieldmen trained to assist customers with problems in dairy management. As dairymen improve their operations, they are asking for more and more technical assistance.

EXAMINES FEED—Dale Hillman, manager of the feeds division for J. D. Heiskell & Co., Tulare, Cal., examines some of the rolled corn used in making dairy feed. With a high grain ration, they try to fluff up the ingredients as much as possible, explained Mr. Hillman.

California Feed Mill Specializes in Dairy Feeds

By Jess Blair
Feedstuffs Special Writer

In the central valley of California, agriculture is highly specialized. Because of this, a feed mill in the area normally caters to only one or two types of customers. The specialty of J. D. Heiskell & Co., Tulare, is manufacturing dairy feeds.

To take care of growing dairy feed business, the firm put in a push button mill in 1950. By 1952, the mill was being changed over to bulk handling of feed. Now about 98% of all manufactured feed is delivered in bulk form.

"We have tried to become dairy specialists," said Dale Hillman, manager of the feeds division. "This means we must not only make the best feed possible at an economical price, but we must also help the owners with management problems."

At present, the company is feeding from 15,000 to 20,000 milk cows, in addition to a large number of calves, heifers and bulls.

Calf Program

"We have a complete calf program," explained the manager. "From the time a calf is born, we help supervise its feeding and care. This prevents death losses and speeds the day when it will become a vigorous, high-producing cow."

Most of the mill's customers live within a 15 to 20-mile radius, though a few dairy owners are located up to 50 miles away. Within recent years, there has been a movement away from the large cities to the more open spaces, and the Tulare area is now getting several of these displaced dairies.

"We have seen our customers go from 40 to 50 cows to twice as many," said Mr. Hillman, "and now some of them have several hundred. As the units grow larger, our job becomes more difficult. Not only are these new dairymen better managers, but they also want a better feed and more technical help."

More Field Servicemen

To keep abreast of the fast-changing industry, the J. D. Heiskell Co. has increased its field servicemen staff. These specialists are carefully trained men. They visit each dairy regularly, note the amount of feed on hand, turn in feed orders to the office, and try to find out any problems the customer may have.

"It's an error if an operator runs out of feed," said Mr. Hillman. "We must be sure he has plenty on hand, and this means checking the bins on every visit."

Most customers grow their roughage or buy it from nearby farms. Since the kind and food content varies, each dairyman has a special ration. This formula is kept in the office and varied each time the roughage changes.

"We make many changes in our feeds," said Mr. Hillman. "For instance, a few years ago it was thought that a milk cow had to have a feed of 16% protein and 4% fat. We find this is not true, because we are getting higher production with high energy rations.

"At present our feeds range from 50 to 75% grain, though 75% is the extreme. This highly-fortified ration helps carry cows through periods of stress, though it does lower the butterfat content from about 3.8% to 3.5%. Still, the increase in production more than offsets this loss."

Buy Local Feed

The company buys as much local grain and feed ingredients as possible. This consists of barley, corn, beet pulp and cottonseed cake. It also ships in soybean meal, wheat bran, copra and a few other ingredients. At one time, copra was used regularly, but now has about been priced out of the market.

"We try to make a rough feed," said Mr. Hillman. "We steam roll our barley and yellow corn instead of grinding it, and we bring in the beet pulp over a conveyor belt into the mixer without grinding it. With our high concentrate rations, it has proved more beneficial to rough up the feeds as much as possible."

The company has four storage bins placed side by side. One bin holds 95 tons of copra or a similar ingredient and a second bin holds 90 tons of cottonseed cake. The other two hold 45 tons of beet pulp and 45 tons of wheat bran.

In addition, the firm has storage for several hundred tons of barley and corn.

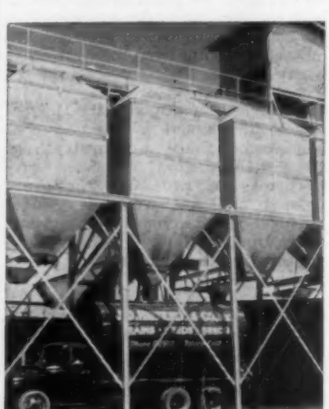
Ingredients are shipped in by rail and truck. They are dumped through grates into receiving pits, taken by elevator up to the holding bins, and then flow by gravity through the mixer. From the mixers, feed is augered into outside overhead bins, where the delivery trucks are loaded.

Some of the milling equipment includes a Moore Drydock steam roller (rolling capacity is 40 tons of grain per day), a 2-ton Valley Foundry mixer, a weigh-buggy, and several other pieces of equipment.

When the company does use ground grain, it is taken into a sepa-

CONTROL BOARD—Almost complete automation has increased the mill's output, and at the same time, lessened the number of employees. Above, an empolyee operates the panel board controls.

BEET PULP—The conveyor belt above is carrying beet pulp to the elevator. The pulp is dumped into a grate, then picked up by the elevator. This feed mill specializes in the manufacturing of dairy feeds.



DELIVERY TRUCK—One of the feed delivery trucks owned by the feed mill is shown loading up. Each truck has more than one compartment so that several farms, using different rations, can be serviced on a single trip.

rate holding bin, then carried by the weigh buggy and dumped into the mixer.

"We are always running a few tests," explained Mr. Griffin, "and we also have a few customers who are not dairymen. Sometimes we grind grain for these purposes."

Delivery Service

One key factor in servicing the dairies is the feed delivery service. The firm has four delivery trucks which hold from 7 to 14 tons each, with the largest truck being used for the long hauls. Three trucks have three compartments each; the other one has four compartments. By using compartments, the company can serve more customers on a single delivery and reduce the number of trips.

In this area, dairying is a complicated business," said Mr. Hillman, "with many specialists involved. We found it best not to stock a large supply of sanitation and medication products because the veterinarians like to sell their own. No large dairyman can get along without the veterinarians, so we prefer to work with these fellows. On sanitation and testing programs they have been a great help to us. So in appreciation, we refrain from selling medication supplies."

Mr. Hillman thinks the dairies will continue to grow larger and become even more specialized. There may even come a time when some of them will put in their own feed mills. So only by making the best feed at the lowest possible price can a firm try to prevent this from happening, he feels.

"Because of such problems, we felt it was advantageous to specialize," explained the manager. "We welcome other types of customers, of course, but catering to a growing dairy industry has become almost a full time job for us."

French Feedmen See Mill in New York

CLYDE, N.Y.—Livestock feed manufacturers in France and those in New York state face similar problems and costs. That was the conclusion of 25 French millers following a day spent recently touring the Clyde Milling plants here.

The Frenchmen, who had been in the U.S. for three weeks, were interested mainly in processes and procurement of materials for making up dairy feeds, although most of them also manufacture poultry mashes and some do pelletizing.

The actual plant tour was divided into small units to allow questions over each phase by the visitors.

F. Tyler Kniffin, president of the company and nutritionist, told the guests the firm had been in business since 1950 and that production capacity runs from 30,000 to 35,000 tons annually. Present production is 100 tons daily. Some of the visitors operate one-man plants with annual capacity of 6,000 tons.

Calvin E. Kniffin, vice president of the Clyde firm, provided cost and sales data for the visitors directly from the company books. Production expenses on a ton of feed was placed at $10.32. The French millers said that their costs are comparable.

Prof. Sam T. Slack told the visitors of the cooperation among Cornell University, the extension service and the state's feed manufacturers. He mentioned dissemination of research findings and conferences by the groups.

Sherwood Feeds Adds Three to Sales Staff

BALTIMORE — Sherwood Feed Mills, Inc., has added three new sales representatives, according to E. F. Sherwood Dickinson, president.

Former Maritime Milling Co. salesmen who joined the Sherwood staff when the Maritime Co. terminated business are: Wilson Wilcox, who had been with Maritime 24 years and is covering the Delaware and New Jersey territory, and Thomas Hagerman, who had been with Maritime 29 years and is covering the West Virginia and western Maryland territory.

W. W. Brown, formerly with A. E. Staley Manufacturing Co., is covering the central Virginia territory.

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More High Energy Rations Used By Cattle Feeders in California

By Jess Blair
Special Correspondent

The change-over from roughage feeds to high concentrates came to California suddenly . . . and the idea has spread fast. In less than two years, it has become an accepted practice and is probably being used by more than 75% of the beef cattle feeders in the state. About the only ones not using high concentrate rations would be the small feeders who have pasture or raise lots of hay on their farms.

Every feedlot operator and feed manufacturer visited on a recent trip was using it for one purpose or another. Some are just following the lead of others. Still, quite a lot of research has been done by both feeders and manufacturers, and there are figures to back up most of the claims.

The Madera Milling Co. of Madera, Cal., was one of the leaders in the use of high concentrates.

High Energy Rations

"The high energy beef ration gained wide popularity in 1959," said J. F. Simonet, a partner in the firm. "Prior to this our feedlot cattle were putting on 1 lb. of gain to 9 lb. of feed under the best management, with some requiring 10 to 13 lb. of feed per pound of gain.

"With high energy feeds, we're now getting 1 lb. of gain on 7 or 8 lb. of feed. We have done it on 6.7 lb., but this is an exception."

By using a high content of grain, the feeders are getting faster gains and doing it at a lower price, based on ingredient prices the last several years. A change in cost of various feeds will likely bring minor changes in formulas, however.

The Madera Milling Co., which owns three mills and works closely with commercial feedlot operators, found that with low energy feed the cost per pound of gain was from 22.5¢ up to 27¢. After changing to a high-grain ration, they lowered the cost to 18.5¢ per pound on several lots. This was based on barley prices ranging from $41 to $47 per ton.

By keeping careful records, the company found that the animals eat less of the high energy feed. A 650 to 675 lb. steer eats 25 or 26 lb. per day, but on the roughage feeds formerly used, will consume from 28 to 32 lb.

For many years, feeders used a 65-80% grain ration. In 1959, however, they raised this to 90 or 95% during the latter part of the animal's feeding period. Most larger feedlots are using a heavier proportion of grain during all the stages of feeding.

These high energy formulas vary, according to the owner's preference, the price and availability of feed and the age and size of the animals. The Madera Milling Co. uses more ingredients than some feeders, partly because they have a laboratory, dehydrating mills and are equipped to add some extras without too much additional cost.

One of their more popular formulas is as follows: Rolled barley, 82%; feed dressing (consisting of molasses and certain minerals) 5%; cottonseed meal, 3%; cottonseed hulls, 3%; and 1% each of fat and micro-supplements. This formula is often changed by feeders to eliminate the cottonseed hulls.

Based on Size

At Tulare, one of the largest feedlots belongs to Herman Colpien, who has been feeding cattle for over 20 years. At present, he is feeding a high energy ration to his 18,000 head, but this varies as the animals increase in size.

"We are using about 95% rolled barley," he said, "and mixing this with 2% alfalfa pellets and 3% cottonseed hulls." In addition, Mr. Colpien regularly adds vitamin and mineral supplements to the ration used.

"We have kept a close check on high energy feeding. A few years ago, we fed up to 14 lb. for each pound of gain; now we get the same increase with from 8 to 10 lb. of feed.

"We start new cattle out on 42% concentrates, change them rather quickly to 72%, then finish up on the 90 to 95% grain. Right now, we are of the opinion that 90% barley will prove more successful than 95%."

Practically all feed manufacturers are making high energy feeds for some of their customers. Even some dairymen are switching to higher energy rations. Many smaller dairymen have green pasture and grow alfalfa hay, which can be utilized at low cost.

Some of the dairy rations now contain 50-75% grain, though 75% is the extreme. This has dropped the butterfat content about three-tenths of 1%, but milk production is higher.

In many sections, the most popular grain is barley, though feeders are also using large quantities of maize and corn. Some prefer to use all three, and usually base their decision on which grain produces the lowest-priced gains.

Most feeders and manufacturers

HIGH ENERGY FEEDS—Rations that are high in concentrates can mean faster-gaining calves, report California beef feeders. More and more of the cattle on feed in the West Coast are receiving high energy feeds.

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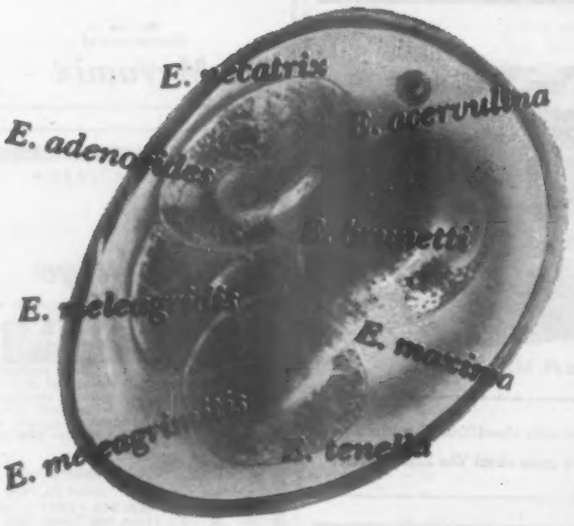

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agree that high energy rations have proved superior to the old roughage feeds used a few years ago.

"The California beef industry used to be the dumping ground for inferior feeds," said Mr. Simonet of the Madera Milling Co. "This is no longer true, however, because the commercial feeder is becoming intelligently curious. He is now pushing those animals for quicker maturity to offset higher costs. At one time, he kept cattle from 4 to 6 weeks before changing to a higher energy feed. Now he does it within 5 to 20 days.

A Poultry Practice

"Really there is nothing new in high energy feeds. Many of our new ruminant feeding principles were borrowed from the poultrymen who have been doing it for years."

Other feeders generally agree with these statements. Jerry Griffin, manager of the Taylor Ranch near Ventura, says high grain rations have been used in the midwest for a long time.

"We've used high energy rations for several years, but stepped up the percentage within the last two years. At present we have an 86% and a 90% grain ration, with barley, milo and corn being used. Our gains are better, even though feed costs have increased."

One other advantage to high grain feeds is the reduction in milling and handling costs. Being less bulky than hay, there is not as much handling, and the tonnage hauled to feedlots is somewhat lower.

Several mill owners say that milling costs have dropped slightly, but they do not have conclusive figures on it. Mr. Colpien says that his milling costs have been reduced—but not enough to eliminate an employee.

"This high grain thing is rather new yet," he said, "so there will be some problems coming up. One thing I've noticed is that there is less manure, in case the owner is selling it. But main objection is the odor. We never had any trouble with odor problems until we changed over to a high milo ration. I've talked with other feedlot owners who say they have the same problem."

Another problem which may come in the future is the price of grain. With hay prices up because of dairy demand and a lack of low-priced land on which to grow it, grain can be purchased economically. But, as several observers pointed out, if this price ratio reverses itself, then feeders may use more roughage feeds.

Still, the consensus of opinion is that high energy feeding will become a permanent practice. Already it is changing the pattern of beef cattle production on the West coast. Last year most California feedlots filled up in September, which was a month earlier than usual. This meant that buyers were taking lighter calves, and with the normal feeding period would be selling them for 100 to 150 lb. lighter than in previous years.

Down in the Imperial Valley at Brawley, the huge Orita Land & Cattle Co. received quite a number of calves last autumn for custom feeding.

"We are definitely in for a cycle of lighter-weight beef," explained Glenn Deen, cattle foreman. "With chain stores going in for pre-packaged meat, the housewife is demanding lighter cuts without so much fat. To meet this demand, we will be putting smaller calves into the feedlots, pushing them with high energy feeds for a shorter feeding period, and selling steers at 100 to 150 lb. lighter. The only way the feedlot operator can meet rising costs is to get a quick turn-over and keep the pens filled the year around."

In conclusion, it might be said that although California seems to be leading the trend toward high grain feeding, feeders and mill owners throughout the West are not far behind.

There is considerable interest among cattle and lamb feeders in the states of Colorado, Utah and Idaho, especially among the all-year feeders. Not many farm feedlots have changed to these rations yet, partly because of green pasture, hay and silage being produced.

This type of feeding is on the decline everywhere. Feedlots are becoming larger and more mechanized. The large feeder has a tremendous investment, and is looking for a faster turn-over of capital, which will mean shorter feeding periods with more highly fortified feeds.

SETS SALES RECORD

NEW YORK—Net sales of National Distillers & Chemical Corp. for the first six months of 1960 were the highest for any first half in the company's history, John E. Bierwirth, chairman, and Roy F. Coppedge, Jr., president, report. They amounted to $280,710,000, up $10,408,000 or 4% over net sales of $270,302,000 for the comparable 1959 period.

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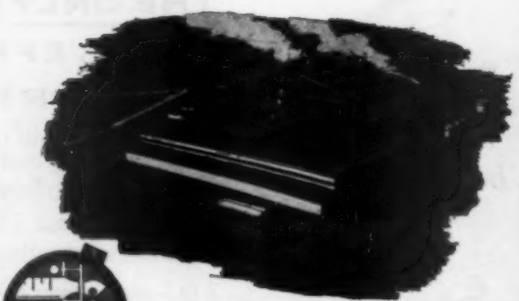

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Valley Mills Names 2 to Warehouse Posts

VICKSBURG, MISS.—The appointment of two assistant warehouse managers has been announced by Valley Mills, Vicksburg.

Harmon A. Gardner has been promoted from a sales representative for Grade A Feeds to assistant manager of Valley Mills' warehouse in Vicksburg. Rex Price holds a similar position at the firm's Ruston, La., warehouse.

Mr. Gardner first became associated with Valley Mills in 1955 as a poultry service specialist, then in 1958 became a sales representative for Grade A Feeds in a large area in Mississippi and eastern Louisiana.

Before becoming associated with Valley Mills, Mr. Gardner operated a dairy business in Auburn, Ala., and was for seven years employed by the Alabama State Department of Agriculture.

Harmon Gardner

Rex Price

Mr. Gardner received his bachelor's degree in dairy husbandry from Alabama Polytechnic Institute and his master's degree in poultry husbandry from Rutgers University.

Mr. Price was employed by the Federal Engineering Corp., Alexandria, La., and the Soil Conservation Department, Ruston, La., before joining Valley Mills. He is a graduate of Ruston High School and attended Henderson County Junior College, Athens, Texas.

In their new positions, Mr. Gardner and Mr. Price will devote much of their time to service and sales work with producers in their respective areas.

Research Group Sets Economic Section

KANSAS CITY — Midwest Research Institute has established an agricultural economics section, and Charles W. Glenn, senior economist, has been appointed its head. J. Slaten Jenner, manager of the economics division, announced the moves.

"The demand for research in agricultural and food economics has been increasing in the past two or three years," Mr. Jenner said. "MRI is working on related studies throughout the country and it is now the first contract-research organization with a group specializing in this field."

The Institute has recently completed 10-year outlook studies on various aspects of agriculture including trends in livestock production.

Mr. Glenn received a B.S. degree in 1950 and M.S. degree in 1951 from Kansas State University. He was with the Agricultural Marketing Service, U.S. Department of Agriculture from 1951 to 1958 and has been senior economist at MRI since 1958.

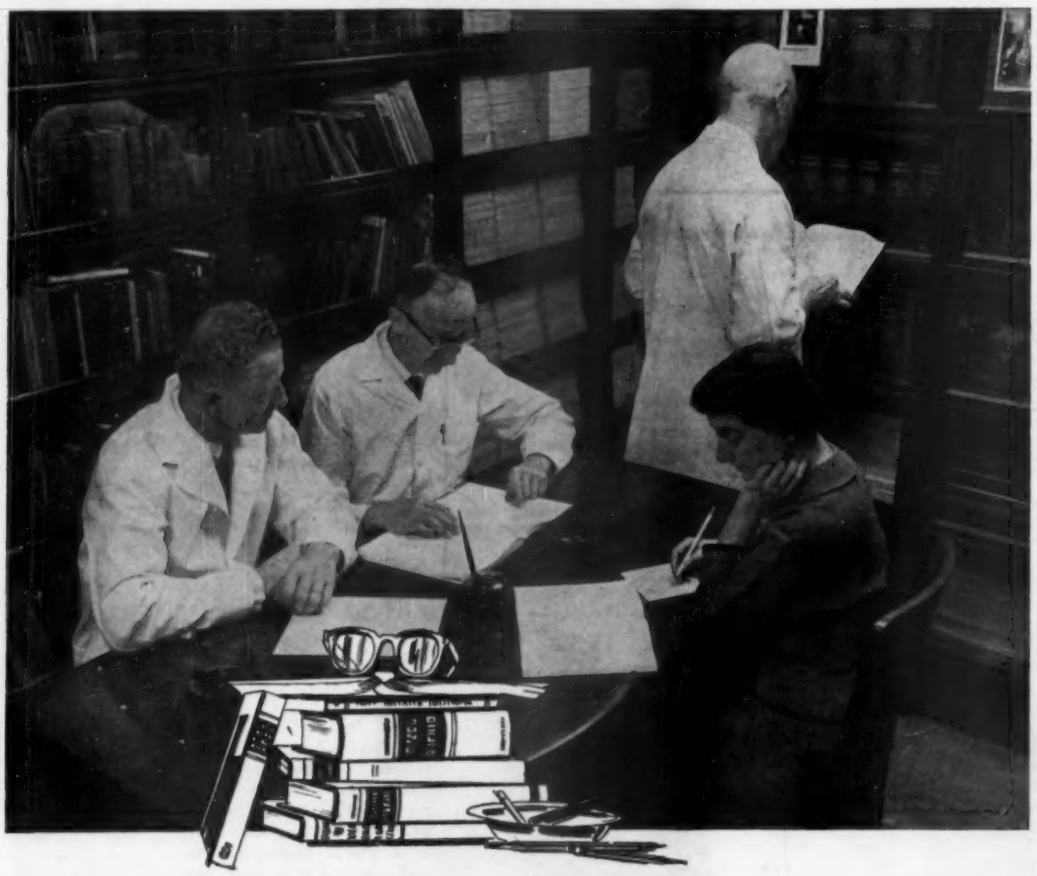
Processor to Double Soybean Capacity

EAGLE GROVE, IOWA — Boone Valley Cooperative Processing Assn. here will double its soybean processing capacity in the near future, it was announced by Keith Voigt, manager. Capacity will be increased from 200 to 400 tons of beans per 24-hour day.

French Oil Mill Co., Piqua, Ohio, will build and install the new equipment. Cost of the expansion is to be $343,000 and will be financed through the Omaha Bank for Cooperatives.

A shutdown of about six weeks is anticipated while the new equipment is installed in the processing firm's building.

Mr. Voigt said that the expansion will allow member cooperatives to sell twice the volume of soybeans to the processor to help meet the demand of increased business at Boone Valley's own feed mill and a cooperative feed plant at Ida Grove, Iowa, and anticipated soybean meal demand of another cooperative feed mill being constructed at Fremont, Neb.



MOST IMPORTANT INGREDIENTS IN LIME CREST TRACE-MINERAL PRE-MIXES

. . . **Knowledge** — information gained from research conducted all over the world. Into the Lime Crest Research Laboratory's library come more than 80 periodicals, mostly technical, in the fields of animal and poultry science, nutrition, biochemistry, analytical chemistry and veterinary science. Some of the files cover a period of almost 35 years. This constantly-growing library is one of the best of its kind — if not the best — in the feed industry. It enables the staff of the Lime Crest Research Laboratory to keep informed of the latest developments in the field of animal nutrition — to be familiar with what has been learned in the past as well as with what is being discovered today . . . and **Experience** — Lime Crest's experience gained in making trace-mineral pre-mixes for a period of almost 25 years.

This knowledge and experience is your assurance that Lime Crest Trace-Mineral Pre-Mixes are formulated in accordance with the best information available. If you are not already using a Lime Crest Trace-Mineral Pre-Mix*, write or call us for more information . . . at least, let us send you our latest folder and price list.

**If you want a special pre-mix, we can satisfy your requirements . . . send us your specifications for a prompt quotation.*

Lime Crest

LIME CREST

TRACE MINERAL PRE-MIXES

Limestone Products Corp. of America, Newton, N. J. — World's Largest Producer of Crystalline Calcite Products
Canadian Distributor: The Ash Chemical Company, 353 St. Nicholas Street, Montreal 1, Province of Quebec

Fleischmann's
F·I·D·Y
IRRADIATED DRY YEAST
RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS

KEEP DISTILLERS SOLUBLES IN YOUR FEEDS-- ALL SUMMER LONG!

SOLULAC

70% corn distillers solubles
30% corn distillers grains

. . . A FERMENTATION PRODUCT RICH IN UNIDENTIFIED GROWTH FACTORS

There's no need to drop out or skimp on growth factors in your feed formula . . . just because it's Summer. Plenty of SOLULAC is always available . . . in Summer just as in Winter. And tests by Distillers Feed Research Council and by leading universities and colleges prove that unidentified growth factors, as supplied through SOLULAC, are important to superior feedlot performance.* Maintain the performance record of your feeds through the Summer . . . keep growth factors in . . . by ordering SOLULAC. Guaranteed *free-flowing* in 50 and 100 lb. bags or bulk carloads . . . available 52 weeks a year.

Additional information on request from

GRAIN PROCESSING CORPORATION

MUSCATINE, IOWA • Telephone AMherst 3-1321 TWX 495

Primary Fermentation Products

Member of the DISTILLERS FEED RESEARCH COUNCIL

Riboflavin — Vitamin B-12 — Bacitracin — GP-101, source of whey and other unidentified growth factors

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WORTH LOOKING INTO

NEW PRODUCTS • NEW SERVICE • NEW LITERATURE

DESCRIPTIONS OF NEW AND IMPROVED PRODUCTS AND SERVICES PROVIDED BY MANUFACTURERS AND SUPPLIERS ARE PRESENTED IN BRIEF FORM. FOR ADDITIONAL INFORMATION, PLEASE USE THE ACCOMPANYING COUPON.

No. 7062—Magnesium Bins

Magnesium Tote Bins, about 40% lighter than the standard aluminum Tote Bins, are being offered by Tote System, Inc., at the same price as the aluminum containers. The price

equalization policy applies to all sizes of Tote Bins, the company says, from the 42 cu. ft. capacity to the 110 cu. ft. capacity for the dry products handling, and the 300 and 400 gal. capacity for liquids. According to company officials, the price equalization policy will allow more companies to turn to bulk handling for over-the-road shipping because more payload can be delivered while still remaining within highway load limits. For more information, check No. 7062 on the coupon and mail.

No. 7061—Bulk Truck Information

Availability of Advance Specifications Sheets on a line of lightweight aluminum Feed Piper bulk trucks and trailers has been announced by Sprout, Waldron & Co., Inc. Advance Specification Sheet No. 223 shows several photographs of the line in capacities from 440 to 1,300 cu. ft. According to company literature, weight savings over conventional type bodies range from 1,000 to 2,000 lb., depending on the size of the unit. For copies, check No. 7061 on the coupon and mail.

No. 7064—Mill Service Brochure

U. E. Fitzpatrick & Co., has published a six-page brochure which describes the feed mill engineering, manufacture and erection services offered by the company. A large number of installations are illustrated, included fully automated feed manufacturing plants, bulk storage and handling facilities as well as modernized and expanded mills. Copies of the brochure can be obtained by checking No. 7064 on the coupon and mailing.

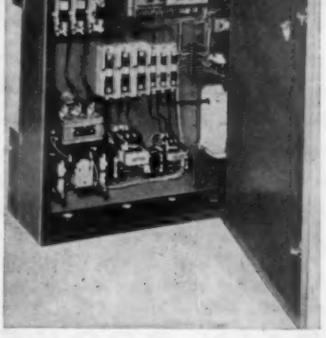
No. 7060—Rolling Egg Cart

A new style egg cart has been introduced by the Big Dutchman Automatic Poultry Feeder Co. The cart has 5 in. rubber wheels, is built with a waist-high handle and measures

48½ in. long, 16½ in. wide and 25 in. high. A series of arc welded rods make up the construction of the cart, and form grate platforms which hold any type of egg basket, the company says. The top and bottom platforms together will hold six of the company's "Safe-Way" baskets, six round plastic-coated baskets, and 12 square plastic baskets. For more information, check No. 7060 on the coupon and mail.

No. 7066—Control Panel System

An improved operating and safety control system has been added to the line of grain driers introduced by the Shanzer Manufacturing Co. Major changes include complete pre-wiring into the control panel all drier motor starters and push buttons along with fused protection ahead of each motor starter, the company says. The



unit is also designed with a main entrance safety disconnect switch. The control panel face provides all push-buttons and indicator lights in a compact grouping for easy accessibility and visibility. Other features include a 60-second automatic purging system, automatic ignition and temperature control, a complete "safety group" shutdown action covering high inlet temperature, high exhaust temperature, flame, fan or power failure. For more information, check No. 7066 on the coupon and mail.

No. 7065—Special Pen-FZ Promotion

Hess & Clark announces a special promotion on both the 6 cc. and the 7.5 g. tube of Pen-FZ, mastitis treatment. The offer includes "1 Dozen Free With 6 Dozen." Both the syringes and tubes are packed in a six-pack sleeve and are attractively packaged

in red, yellow and black, the company says. For dealers who desire larger amounts, the promotion is available in "2 Dozen Free With 12 Dozen" and "6 Dozen Free With 36 Dozen" lots. The product contains nitrofurazone, a germ-killing chemical. The promotion closes Sept. 15. For more information, check No. 7065 on the coupon and mail.

No. 7063—Storage Bin Payment Plan

Ripco Air Systems is offering a bin storage program designed to help feed dealers get into a bulk delivery program or expand existing bulk facilities. The bins may be erected in the mill, or at any desired site, the company says. Bins may be financed through the Ripco time payment plan with repayment schedules up to three years. The hoppers are constructed of 12 gauge material and the sides are 14 gauge. The bins are leak proof and will not bulge under extreme pressure, the company says. They have a 60° slope to the hopper and two straight vertical sides. The company offers bins completely erected, painted and equipped for pneumatic air delivery. Regular draw-off spout is 4 ft. above ground but bins can be elevated for overhead storage. For complete information, check No. 7063 on the coupon and mail.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number of the coupon and forwarding it to Feedstuffs.

No. 7020—Pig holding unit, Caswell Manufacturing Co.

No. 7021—Feed weighing, Scales, Inc.

No. 7022—Bag, bulk unit, Sudenga Industries, Inc.

No. 7023—Jackknife premium, Chas. Pfizer & Co., Inc.

No. 7024—Mobile management program, Barnard & Leas Manufacturing Co., Inc.

No. 7025—Sampling probe, Seedburo Equipment Co.

No. 7026—Van tank, Transicold Corp.

No. 7027—Bulk material handler, Finco, Inc.

No. 7028—Automatic calf feeder,

Send me information on the items marked:

- ☐ No. 7060—Rolling Egg Cart
- ☐ No. 7061—Bulk Truck Information
- ☐ No. 7062—Magnesium Bins
- ☐ No. 7063—Storage Bin Payment Plan
- ☐ No. 7064—Mill Service Brochure
- ☐ No. 7065—Special Pen-FZ Promotion
- ☐ No. 7066—Control Panel System

Others (list numbers) .....

NAME .....

COMPANY .....

ADDRESS .....

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS PERMIT No. 2 (Sec. 34.9, P. L. & R.) MINNEAPOLIS, MINN.

BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Feedstuffs

P. O. Box 67

Reader Service Dept. Minneapolis 40, Minn.

Call
Ralph Grier
FE 8-8511
See page 41

the newest sales-building idea in cotton feed bags...

BEMIS LINEN-LYKE BEMILIN®

Linen-Lyke Bemilin has the rich color and look of natural linen. It's great for curtains, table runners, napkins, place mats, sportswear and many other home-sewing uses. Department stores frequently sell piece goods in a similar finish for $1.00 and more per yard . . . yet the cost is just the same as you've been paying for regular Bemilin Bags.

Your customers will love it.

And Bemis Linen-Lyke bags are now ready in a whole series of fresh, colorful, new print patterns selected on the basis of a nation-wide survey among farm and suburban wives who buy feed in cotton bags.

Linen-Lyke is available only in Bemilin bags. You'll want to get on the band wagon early. Call your Bemis Man right away.

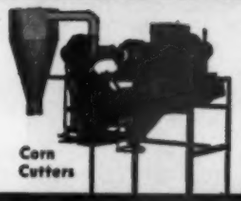
Where flexible packaging ideas are born

GENERAL OFFICES—
111-F N. 4th Street, St. Louis 2
Sales Offices in Principal Cities

BIG CHIEF

Pit Augers • Elevator Legs • Mixers • Scalpers •
Graders • Earcorn Crushers • Steel Bins

Hammer Mills 50 to 150 H.P.



Corn Cutters

CUSTOM MILLERS SUPPLY CO.
BOX 537 MONMOUTH, ILLINOIS
MANUFACTURERS OF QUALITY MILLING EQUIPMENT SINCE 1930

K & K Manufacturing Co.

No. 7029—Poultry health calendar, Dr. Salsbury's Laboratories.

No. 7030—Moisture recorder, Burrows Equipment Co.

No. 7031—Coding, marking unit, Thomas Engineering Co.

No. 7032—Expanded line, Cleveland Vibrator Co.

No. 7033—Premix program booklet, Thompson-Hayward Chemical Co.

No. 7034—Fall promotion, Agricultural Division of Chas. Pfizer & Co., Inc.

No. 7035—A and D fortifier, Peter Hand Foundation.

No. 7036—Automatic proportioner, Vineland Poultry Laboratories, Inc.

No. 7037—Protein meter, Mogler Farm Industries, Inc.

No. 7038—Vitamin K for blood spots, Heterochemical Corp.

No. 7039—Chicken, turkey wormer, Specifide, Inc.

No. 7040—General bulletin, B-I-F Industries.

No. 7041—Portable power unit, Big Dutchman Automatic Poultry Feeder Co.

No. 7042—Feed mill bulletin, Seco, Inc.

No. 7043—Dairy premix, Specifide, Inc.

No. 7044—Fat handling unit, Thompson-Gill, Inc.

No. 7045—Bag, bulk body, New Way Manufacturing Co.

No. 7046—Cattle self feeder, Brower Manufacturing Co.

No. 7047—Mixing salt, The Morton Salt Co.

No. 7049—Sewing attachment, Bemis Bro. Bag Co.

No. 7050—"Eggtober" program, Chas. Pfizer & Co., Inc.

No. 7051—Low-level antibiotic clearance, Abbott Laboratories.

No. 7052—Bulk feed bodies, Simonsen Manufacturing Co.

No. 7055—Feed pelletizing binder, Consolidated Water Power & Paper Co.

No. 7056—Standard utility building, Behlen Manufacturing Co.

No. 7057—Swine management materials, SIU Foundation.

No. 7058—Feeder, rotary valve bulletin, Fuller Co.

No. 7059—Face fly repellent, Myzon Laboratories.

Specifide Appoints Advertising Director

INDIANAPOLIS—Appointment of Robert J. Battin as advertising director of Specifide, Inc., Indianapolis, has been announced by John O. Beasley, president.

R. J. Battin

A graduate of the University of Wisconsin, Mr. Battin began his career in agricultural journalism at Wisconsin by spending a year in the university's farm radio activities. In 1957, he moved to Michigan State University where he represented the Michigan Agricultural Experiment Station in public relations for 2½ years before joining Specifide.

Doctorate in Poultry

ATHENS, GA.—A program leading to the degree of doctor of philosophy in poultry has been authorized by the state board of regents for the University of Georgia. A spokesman said that the program will be initiated in the college of agriculture this fall.

The action will give the school and the poultry industry further recognition, according to L. R. Seibert, executive secretary to the board of regents.

DPL N-63 strain NEWCASTLE VACCINE offers longer lasting, more positive protection

Laboratory and field tests on more than 20 million birds prove DPL's new N-63 strain Newcastle Vaccine offers better and longer lasting protection than the B1 strain for these important reasons:

High Immunizing Power. While the N-63 strain Newcastle virus is low in disease producing properties, research has adequately demonstrated that it will produce higher serological titers and more durable immunity than the B1 strain.

Revaccinations Are Reduced To A Minimum. The greater immunizing power of the N-63 strain reduces the need for so many revaccinations in broiler, breeder and laying flocks. In broilers, revaccination is only necessary if birds are carrying parental immunity at the time the vaccine is first given.

Has The Spreading Potential Necessary For Mass Vaccination. The infecting and spreading potential of the N-63 strain Newcastle Vaccine continues through the reaction period. This quality, so important to successful mass vaccination, is lacking in the B1 strain.

Wide Choice Of Applications. The N-63 strain is available in the Newcastle and in the combination Newcastle-Bronchitis vaccines. N-63 can be applied intranasally, in water, and in the vent.

The longer lasting, more positive protection of the DPL N-63 strain belongs in your vaccination program. Write us today for literature, prices.

DELAWARE POULTRY LABORATORIES INC.
Subsidiary of Sterling Drug Inc. MILLSBORO, DEL.
DPL

Dog food manufacturers

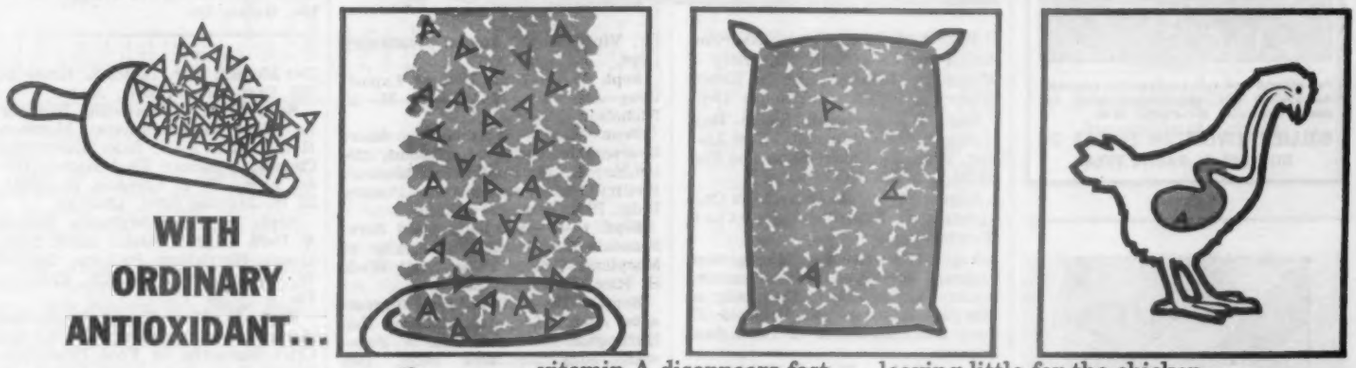
Add 20% palatability to your foods with toasted Kellogg's

KEL-MIX

Kellogg's secret *toasting* process greatly improves appearance and taste, helps lock in cereal nutrients.
Meal or crumbs—bulk or sacked.

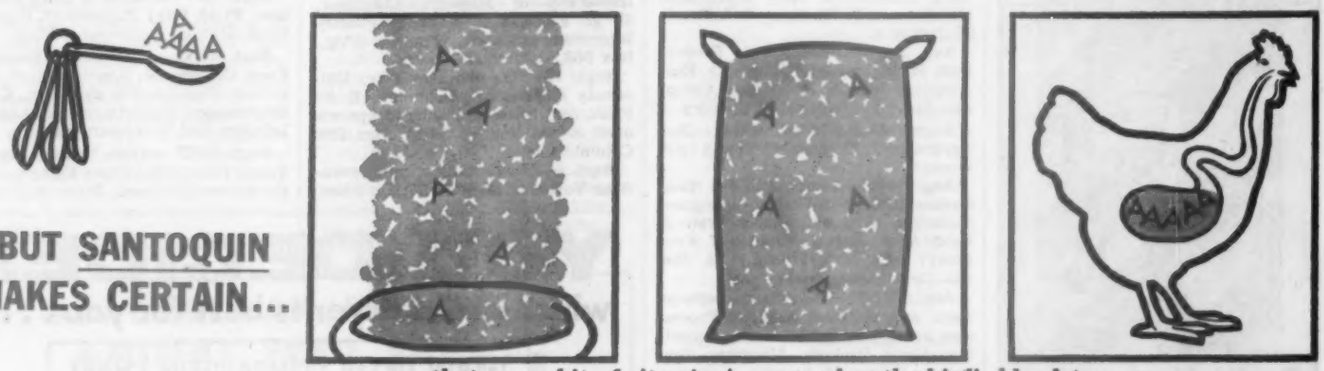
For complete story, phone or wire (collect):
KELLOGG SALES COMPANY
Battle Creek, Michigan
Phone—Woodward 2-5131

ARE YOU SURE A LOT OF VITAMIN A IN YOUR FEED ISN'T WASTED . . . BECAUSE YOUR ANTIOXIDANT STOPS WORKING WHERE IT'S NEEDED MOST?



WITH ORDINARY ANTIOXIDANT...

vitamin A disappears fast . . . leaving little for the chicken



BUT SANTOQUIN MAKES CERTAIN...

that every bit of vitamin A . . . reaches the bird's bloodstream . . .

ONLY SANTOQUIN® FOOD VALUE GUARD PRESERVES VITAMIN A ALL THROUGH THE BODY OF THE BIRD

Natural vitamin A *begins* to oxidize in the feedstuff during mixing, *continues* to oxidize in the mixed feed during storage, *oxidizes most rapidly* in the bird's digestive tract. That's why quality feed mills often add *excess* supplementary vitamin A . . . to make sure enough "A" lasts through metabolism. ■ Now . . . *Santoquin* stops oxidation of feedstuff vitamin A as soon as you mix it in . . . prevents loss of your feed's vitamin potency *even in the intestine* of the birds. And that's not all. Santoquin acts in the bird just like vitamin E . . . to give sure protection against vitamin deficiency diseases. Santoquin saves the "A" . . . and works like "E"! ■ Only ¼ pound per ton does the job. Ask for Santoquin in your dehydrated alfalfa, premixes, and in your concentrates. We'll be happy to send you *all* the facts. *Mail the coupon today.*

SANTOQUIN SAFEGUARDS . . . LIKE NO OTHER POULTRY FEED ANTIOXIDANT CAN

	ORDINARY ANTIOXIDANT	SANTOQUIN
Prevents rancidity in feed	Yes	Yes
Protects vitamin A through digestion and metabolism	No	Yes
Preserves carotenes	No	Yes
Improves pigmentation by guarding xanthophylls	No	Yes
Acts in the bird like vitamin E to prevent diseases	No	Yes

MONSANTO CHEMICAL COMPANY
Organic Chemicals Division, Dept. 2728-A, St. Louis 66, Mo.

Please send me:

- ☐ "Santoquin Poultry Feeds," Tech. Bulletin FC-9
- ☐ "Question and Answer" brochure on Santoquin
- ☐ Names of pre-mixers supplying Santoquin
- ☐ Research reports

Monsanto

Name _____ *Title* _____

Company _____

Street _____

City _____ *State* _____

REPEAT CUSTOMERS PROVE . . . THE
WHIRLWIND FEEDER
DOES A BETTER JOB — LONGER!

For mineral and salt feeding. It's portable, durable—all steel corrosion-protected! For details regarding dealerships write . . .

COLLIER LIVESTOCK FEEDER CO
BOX 896-G, RALLS, TEXAS

Profit More With Hi-Mo-Lass

More and more dealers are making handsome profits by handling HI-MO-LASS. This dried molasses product is fine grained, dry and dustless; guaranteed free-flowing in any weather . . . a perfect feed supplement, an ideal silage preservative. Available in either pellet or regular form. With 42% or more sugar content and rich in natural minerals, HI-MO-LASS is a product that will make money for your feeders . . . making repeat sales a sure thing.

FREE GIFTS

Buy HI-MO-LASS and receive valuable free gifts! With the purchase of a ton or more, you will be given your choice from such items as watches, fishing rods, golf carts, electric shavers and many more similar premiums. Ask for our free gift order form containing the complete details.

We Will Make Your Own Brand

You manufacturers who would like to add a fast-selling dried molasses product to your feed line, can do so with ease. Blackstrap molasses with corn oil meal or soybean millfeed can be made under your label. Contact us for full particulars.

DFP DOANE FEED PRODUCTS
JOPLIN, MISSOURI
P. O. Box 1108
MAyfair 4-6166

Convention Calendar

Aug. 9-10 — Wisconsin Nutrition School for Feed Men; University of Wisconsin, Madison; chm., Dr. Robert Grummer, Animal Husbandry Dept.

Aug. 11 — Michigan Swine Day; Michigan State University, East Lansing; chm., Ed Miller, Extension Specialist, Animal Husbandry.

August 12 — Ohio Dairy Day; Ohio Agricultural Experiment Station, Wooster.

Aug. 14-18—Business Management Program, sponsored by Southeastern Poultry & Egg Assn., University of Georgia, Athens; sec., Harold E. Ford, 235 East Ponce de Leon Ave., Decatur.

Aug. 16-17 — Mutual Millers and Feed Dealers Assn.; Hotel Jamestown, Jamestown, New York; sec., Mrs. Donald E. Mattison, P.O. Box 8, Cattaraugus.

Aug. 18—Michigan Cattle Feeders Day; Michigan State University, East Lansing; Hugh E. Henderson, Extension Specialist, Animal Husbandry.

August 19—Ohio Swine Day; Ohio Agricultural Experiment Station, Wooster.

Aug. 22-23—Kentucky Feed Conference; Campbell House, Lexington; sponsored by the Kentucky Grain & Feed Assn. and University of Kentucky; sec., Jack Weber, P.O. Box 425, Lexington.

Aug. 22-25 — American Soybean Assn. and National Soybean Processors Assn., joint conference and meeting; Hotel Peabody, Memphis, Tennessee; George M. Strayer, exec. vice pres., American Soybean Assn., Hudson, Iowa, and R. G. Houghtlin, pres., National Soybean Processors Assn., 3818 Board of Trade Bldg., Chicago 4, Ill.

Aug. 25—Michigan Lamb Feeders Day; Michigan State University, East Lansing; chm., Leonard Blakeslie, professor of Animal Husbandry.

Aug. 26—Purdue Swine Day; Purdue University, Lafayette, Ind.; Dr. J. H. Conrad, Animal Science Dept.

Aug. 29-Sept. 1 — Georgia Poultry Institute; Rock Eagle, Georgia; Milton Dendy, Extension Poultryman, College of Agriculture, University of Georgia, Athens.

Sept. 1 — Illinois State Turkey Growers Assn.; Coe Gaulrapp Turkey Farm, Rock Falls, Ill.; sec., S. B. Swann, Kauffman Turkey Farms, Waterman, Ill.

Sept. 1-6 — International Congress on Nutrition; Sheraton-Park Hotel, Washington, D.C.; sponsored by International Union of Nutritional Sciences; sec., Milton O. Lee, 9650 Wisconsin Ave., Washington 14, D.C.

Sept. 2—Missouri Swine Day; University of Missouri, Columbia; Dr. L. F. Tribble, Animal Husbandry Dept.

Sept. 2 — Illinois Cattle Feeders Day; University of Illinois, Urbana; A. L. Neumann, Animal Science Department.

Sept. 6-9—Feed Microscopy Short Course; University of Missouri, Columbia; chm., G. M. Barnhart, Chief Chemist, State Department of Agriculture, Jefferson City.

Sept. 8-9 — Pet Food Institute; Drake Hotel, Chicago; sec., Clyde Kassens, 333 N. Michigan Ave., Chicago.

Sept. 12-13—Minnesota Animal Nutrition and Health Short Course; University of Minnesota, St. Paul.

Sept. 13 — Iowa Feed Conference; Iowa State University, Ames; chm., Dr. Virgil Hays, Animal Husbandry Dept.

Sept. 13-15—Dixie Poultry Exposition; Asheville, N.C.; sec., N. B. Nicholson, Monroe, N.C.

Sept. 13-15 — Hatchery Short Course; University of Missouri, Columbia; E. M. Funk, sec., Missouri Poultry Improvement Assn., Poultry Bldg., P. O. Box 568, Columbia.

Sept. 14-15—Maryland Feed Servicemen's Conference; University of Maryland, College Park; chm., Wade H. Rice, Extension Service.

Sept. 14-16—National Feed Ingredients Assn.; Liggetts Holiday Inn, Burlington, Wis.; sec., Paul W. Bonewitz, 1023 Equitable Bldg., Des Moines, Iowa.

Sept. 15—All Poultry Industry Day; University of Missouri, Columbia; E. M. Funk, sec., Missouri Poultry Improvement Assn., Poultry Bldg., Box 568, Columbia.

Sept. 16—Missouri Egg Day; University of Missouri, Columbia; E. M. Funk, sec., Missouri Poultry Improvement Assn., Poultry Bldg., Box 568, Columbia.

Sept. 20-21—Iowa Poultry Convention; Veterans Memorial Auditorium, Des Moines; mgr., LeRoy L. Kruskop, 335 East Lincoln Way, Ames.

Sept. 21-22 — Marketing Seminar for Feed Manufacturers; Morrison Hotel, Chicago; Sales Executives Council, American Feed Manufacturers Assn., W. E. Glennon, president, 53 W. Jackson Blvd., Chicago.

Sept. 21-23—Pennsylvania Millers & Feed Dealers Assn.; Hotel Penn Harris, Harrisburg, Pa.; sec., Donald W. Parke, P. O. Box 329, Ephrata, Pa.

Sept. 21-23 — Feed Production School; Continental Hotel, Kansas City; sponsored by Feed Production School, Inc.; pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Sept. 22 — Minnesota Beef-Grassland Field Day; Rosemount Experiment Station, Rosemount, Minn.

Sept. 22-23 — Arkansas Formula Feed Conference; University of Arkansas, Fayetteville; chm., Dr. E. L. Stephenson, Department of Animal Industry and Veterinary Science.

Sept. 28-29 — Ohio Poultry Assn.; Yough Bldg., Ohio State Fairgrounds, Columbus, Ohio; sec., Bruce R. Davis-

New Listings

For the convenience of readers who scan the Convention Calendar regularly for new listings, those added to the columns in the current week appear separately from ones which have been entered previously. The following week they will be moved to their proper slot where they will remain until the event is held.

Aug. 15-19—Florida Poultry Institute; Camp McQuarrie, Fla.; J. S. Moore, Extension, University of Florida, Gainesville.

YOU DECIDE!
which grain dryer is best for you . . .

GRAIN DRYER COMPARISON CHART

	ARID-AIRE	Brand A	Brand B	Brand C	Brand D
NON-CLOGGING DESIGN — Grain dryed, not "baked", on constantly moving apron.	YES	NO	NO	NO	NO
FULLY AUTOMATIC — Continuous flow operation . . . no loading and unloading.	YES	YES	YES	NO	YES
DRYING CAPACITY — Will match any dryer of comparable cost.	YES	YES	YES	NO	NO
SAFETY FIRST DESIGN — Assures lowest fire insurance ratings.	YES	NO	NO	NO	NO
ASSEMBLY COSTS AT INSTALLATION SITE.	NONE	All ordinary dryers require assembly at elevator. This cost varies and can run as high as $5,000 or more.			
OPERATING COSTS — Fuel, electricity, labor.	LOW	Med.	Med.	High	Med.
COMPACT, PORTABLE — Can be moved with drying "season."	YES	NO	NO	YES	NO
DESIGN MAKES CUSTOM DRYING PROFITABLE.	YES	NO	NO	NO	NO
HAS SUBSTANTIAL FUTURE TRADE-IN VALUE.	YES	NO	NO	YES	NO
WORLD'S EASIEST TO TRY AND EASIEST TO BUY GRAIN DRYER.	YES	NO	NO	NO	NO

Before you buy, compare ARID-AIRE with any other grain dryer made!

OWNER'S VIEWPOINT: "After we began drying grain with ARID-AIRE, both state and county ASC office have never refused to accept our dried corn for sealing. They also have taken all our dried grain sorghum. Feed processors making turkey feed have never complained and have always accepted our dried corn for their feeds." *George Arnold, Davis Elevator Co., Denhart, Iowa.*

Feature for feature, point for point, *compare* the ARID-AIRE Grain Dryer with any other on the market today. You'll see why ARID-AIRE is not just equal — but *superior* to every other brand. Before you buy any grain dryer, talk to an ARID-AIRE representative or talk to an ARID-AIRE owner! You'll be more convinced than ever that ARID-AIRE is today's soundest grain dryer investment!

Before you buy any grain dryer get the facts about ARID-AIRE. Write today for free literature and details about the ARID-AIRE Trial Plan.

DAYCOM, INC.
A Subsidiary of The DAY Company
Dept. A, 157 No. Bryant Ave. • Minneapolis 3, Minn.
FE. 6-9671

CALENDAR FOR 1960-61

AUGUST

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER

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25	26	27	28	29	30	

OCTOBER

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30	31					

NOVEMBER

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son, Poultry Dept., Ohio State University, Columbus.

Sept. 29 — Vermont Feed Dealers and Manufacturers Assn.; University of Vermont, Burlington; sec., D. C. Henderson, Hills Agricultural Science Bldg.

Sept. 29-30 — Iowa Seed Dealers Assn.; Savery Hotel, Des Moines; sec., Bob Skinner, 401 Shops Bldg., Des Moines 9.

Sept. 30—Nebraska Feed and Nutrition Conference; University of Nebraska College of Agriculture, Lincoln; chm., Dr. John L. Adams, Poultry Husbandry Dept.

Oct. 2-4 — Poultry Industries of Louisiana, Inc.; Bellemont Motor Hotel, Baton Rouge; sec., Clyde Ingram, Knapp Hall, Louisiana State University, Baton Rouge.

Oct. 4-5—Washington Junior Poultry Exposition; Western Washington fairgrounds, Puyallup, Washington; W. R. Jenkins, Extension Poultry Specialist, Agricultural Extension Service, Washington State University, Pullman.

Oct. 4-6 — Northeastern Poultry Producers Council; Exposition and Convention; Onondaga County War Memorial Bldg., Syracuse, N.Y., Doris Endebrock, Exposition Mgr., 10 Rutgers Place, Trenton 8, N.J.

Oct. 4 - 6 — Northeastern Poultry Producers Council Exposition and Convention; War Memorial Auditorium, Syracuse, N.Y.; sec., Richard I Ammon, 10 Rutgers Place, Trenton 8 N.J.

Oct. 5-7—Texas Nutrition Conference, Texas A&M College Station; chm., Dr. J. R. Couch, Department of Poultry Science.

Oct. 11-12—Virginia State Poultry Federation; Hotel Roanoke, Roanoke, Va.; sec., Paul Williams, 615 East Franklin Street, Richmond 19.

Oct. 11-12—Virginia State Poultry Federation convention and trade show; Hotel Roanoke, Roanoke, Virginia; sec., J. Paul Williams, 615 East Franklin Street, Richmond 19.

Oct. 12-13 — Association of American Feed Control Officials Annual Meeting; Shoreham Hotel, Washington, D.C.; sec., Bruce Poundstone Feed and Fertilizer Dept., Agricultural Experiment Station Bldg., University of Kentucky, Lexington.

Oct. 13-14 — West Virginia Feed Dealers Assn.; Blackwater State Park, Thomas, W. Va.; J. Z. Ellison, 801 Willowdale Rd., Morgantown.

Oct. 13-14 — Turkey Short Course and Jr. Market Turkey Show; University of Missouri, Columbia; E. M Funk, sec., Missouri Poultry Improvement Assn., Poultry Bldg., Box 568, Columbia.

Oct. 16-18—Kentucky Poultry Federation and Kentucky Poultry Improvement Assn.; Kentucky Hotel, Louisville; John W. Tuttle, field manager.

Oct. 16-20 — Business Management Program; sponsored by the Southeastern Poultry & Egg Assn., University of Georgia, Athens; sec., Harold E. Ford, 235 East Ponce de Leon Ave., Decatur.

Oct. 17-18—California Animal Industry Conference; Fresno Memorial Auditorium, Fresno, Cal.; co-sponsored by California Hay, Grain & Feed Dealers Assn. and University of California; chm., Bert Maxwell, Nulaid Farmers Assn., Petaluma; association office, 1400 Tenth St., Sacramento 14.

Oct. 20-21—Cooperative G.L.F. Exchange, Inc.; stockholders annual meeting; Onondaga War Memorial Bldg., Syracuse, N.Y.

Oct. 20-21—Poultrymen's Institute; Washington State University, Pullman; W. R. Jenkins, Extension Poultry Specialist, Agricultural Extension Service.

Oct. 23-25—Southeastern Feed Production School; University of Georgia, Athens; Harold E. Ford, Southeastern Poultry & Egg Assn., 235 East Ponce de Leon Ave., Decatur, Ga.

Oct. 25-26 — Indiana State Poultry Assn.; Purdue Memorial Center, Purdue University, Lafayette; sec., Robert L. Hogue, Poultry Science Bldg. Purdue.

Oct. 27-28—National Swine Industry Conference; University of Kentucky, Lexington.

Oct. 27-28 — Washington Poultry and Hatchery Assn.; Chinook Hotel, Yakima.

Oct. 27-29—National Swine Industry Conference; University of Kentucky, Lexington, Ky.; chm., Keith Myers, Secretary, National Swine Growers Council, Box 241, Grundy Center, Iowa.

Oct. 28—Illinois Sheep Day; University of Illinois, Urbana; chm., Dr. U. S. Garrigus, Animal Science Dept.

Nov. 2-3—Kansas Poultry Assn.; Broadview Hotel, Wichita; sec., Harry J. Reed, Box 663, Manhattan.

Nov. 2-3—Illinois Feed Assn.-Illinois Poultry & Hatchery Federation, mory, Springfield; sec., IFA, Dean M. Clark, 141 W. Jackson Blvd., Chicago 4; sec., IPHF, Aubrey Harless, Shelbyville, Ill.

Nov. 3—South Dakota Swine Research Day; South Dakota State College, Brookings.

Nov. 3-4 — Cornell Nutrition Conference; Hotel Statler, Buffalo, N.Y.; chm., Dr. H. H. Williams, Biochemistry and Nutrition Dept., Savage Hall, Cornell University, Ithaca, N.Y.

Nov. 9-12 — National Renderers Assn.; Statler-Hilton Hotel, Dallas, Texas; sec., Miss Jamie Fox, 30 N. LaSalle St., Chicago, Ill.

Nov. 14-15 — Washington Animal Industry Conference; Skagit Valley College, Mount Vernon, Wash.; John G. Wilson, mgr., Washington State Feed Assn., 814 Second Ave. Bldg., Seattle 4.

Nov. 16-17—Missouri Poultry Improvement Assn.; Hotel Continental, Kansas City; sec., E. M. Funk, Columbia, Missouri.

Nov. 16-18—Florida Nutrition Conference; University of Florida, Gainesville; chm., Dr. J. P. Feaster, Animal Husbandry and Nutrition Dept.

Nov. 25-26 — American Society of Animal Production; Hotel Sherman, Chicago, Ill.; sec., Clair E. Terrill, Animal Husbandry Research Divi-

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sion, Agricultural Research Center, Beltsville, Md.

Dec. 1-2—North Carolina Animal Nutrition Conference; North Carolina State College, Raleigh; chm., Dr. J. W. Kelly, Poultry Science Dept.; co-sponsored by North Carolina Feed Manufacturers Assn., sec., McNair Evans, Box 44, Mocksville.

Dec. 12-13 — Midwest Veterinary Nutrition Conference; Continental Hotel, Kansas City; Lloyd Larson, Midwest Feed Manufacturers Assn., 20 W. 9th St. Bldg., Kansas City 5, Mo.

Dec. 13-15 — Minnesota Poultry Hatchery Assn.; Hotel Radisson, Minneapolis, Minn.; sec., L. L. Baumgartner, Litchfield, Minn

1961

Jan. 4-6—National Turkey Federation; Conrad Hilton Hotel, Chicago, Ill.; sec., M. C. Small, P.O. Box 69, Mt. Morris, Ill.

Jan. 12-13—Michigan Feed & Grain Dealers Assn.; Michigan State University, Kellogg Center; sec., Nevel Pearson, P.O. Box 472, East Lansing.

Jan. 15-17—Indiana Grain and Feed Dealers Assn.; Claypool Hotel, Indianapolis; sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis 4.

Jan. 16-17—Northwest Retail Feed Assn.; Hotel Pick-Nicollet, Minneapolis; sec., W. D. Flemming, 112 Grain Exchange Bldg., Minneapolis, Minn.

Jan. 23-25—Farmers Grain Dealers Assn.; Civic Memorial Auditorium, Fargo, N.D.; sec., Lloyd C. Hanson, 513 Black Bldg., Fargo.

Jan. 27 — Missouri Turkey Day; University of Missouri, Columbia; E. M. Funk, sec., Missouri Poultry Improvement Assn., Poultry Bldg., Box 568, Columbia.

Jan. 31-Feb. 1 — Hoosier Turkey Trot; Purdue Memorial Union, Purdue University, Lafayette, Ind.; John N. Howell, Turkey Department, Indiana State Poultry Assn., Poultry Bldg., Purdue University.

Feb. 2-3—Oregon Animal Nutrition Conference; Withycomb Hall, Oregon State College, Corvallis.

Feb. 3-4—Minnesota Turkey Growers Assn., Leamington Hotel, Minneapolis; sec., Roy Munson, 2200 University Ave., St. Paul, Minn.

Feb. 6-7—Montana Nutrition Conference; Montana State College, Bozeman; chm., Dr. O. O. Thomas, Animal Industry and Range Management Dept.

Feb. 7-10—American Dehydrators Assn.; Jung Hotel, New Orleans, La.; executive vice president, Joseph Chrisman, 430 Board of Trade Bldg., Kansas City 5, Mo.

Feb. 8-9—Pacific Northwest Feed Mill Production School; Hotel Leopold, Bellingham, Wash.; sponsored by Washington State Feed Assn.; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 10 — Washington State Feed Assn., annual convention; Hotel Leopold, Bellingham, Wash.; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 10-11—Poultry Fact Finding Conference; sponsored by Institute of American Poultry Industries; pres., Harold M. Williams, 59 E. Madison, Chicago 2.

Feb. 19-21—Midwest Feed Manufacturers Assn.; Hotel Muehlebach, Kansas City, Mo.; executive vice president, Lloyd S. Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Feb. 19-21 — Ohio Grain & Feed Dealers Assn.; Neil House, Columbus; sec., George G. Greenleaf, 5625 N. High St., P.O. Box 121, Worthington.

March 16-17—Oregon Feed & Seed Dealers Assn.; Sheraton-Portland Hotel, Portland; mgr., Russ Hays, 702 Lewis Bldg., Portland 4.

March 20-24—Grain & Feed Dealers National Assn.; Washington, D.C.; sec., Herbert L. Sharp, 400 Folger Bldg., Washington 5, D.C.

April 10-12—Poultry and Egg National Board; Sheraton Towers Hotel, Chicago, Ill.; mgr., Lloyd H. Geil, 8 S. Michigan Ave., Chicago 3.

April 27-29—Kansas Grain & Feed Dealers Assn.; Broadview Hotel, Wichita; sec., Orris E. Case, 609 Wiley Bldg., Hutchinson.

April 23-28—Grain Elevator & Processing Supterintendents; Baker Hotel, Hutchinson, Kansas; sec., Dean M. Clark, 1115 Board of Trade Bldg., Chicago 4, Ill.

May 7-10—American Feed Manufacturers Assn. Convention and National Feed Show; Conrad Hilton Hotel, Chicago, Ill.; sec., W. T. Diamond, 53 West Jackson Blvd., Chicago 4.

Oct. 22-24—Midwest Nutrition Conference; Hotel Muehlebach, Kansas City, Mo.; sponsored by Midwest Feed Manufacturers Assn.; executive vice president, Lloyd S. Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

1962

Aug. 13-18—12th World's Poultry Congress; Show Grounds of the New South Wales Royal Agricultural Society, Sydney, Australia; Dr. Cliff D. Carpenter, chairman, U.S. Participation Committee, 1207 Emerald Bay, Laguna Beach, Cal.; Dr. A. William Jasper, secretary, c/o AFBF, 2300 Merchandise Mart, Chicago 54, Ill.

New Feed Mill

EARLHAM, IOWA—The Farmers Cooperative Elevator Co. is now operating its new push-button feed mill. The plant includes a 100 h.p. grinder; 3-ton mixer; 14 bins, with push-button control of ingredients going into the mixer; a grain roller; pellet mill; and eight bins over the driveway holding 14,000 bu. of grain for grain bank customers. The building is of slip-form construction.

The cooperative also took possession recently of the Earlham Mill, owned and operated by C. M. Soderberg for the past 33 years.

Named Sales Firm

SHELDON, IOWA—Northern Biochemical Corp. here has appointed the Amburgo Co., Inc., Philadelphia, as sales representative on the eastern seaboard for Actaferm, its enzyme-based fermentation additive to cattle, hog and poultry feeds.

Layer Comfort Pays

'Environment Can Make or Break an Operation'

By Dr. J. M. Snyder
Beacon Milling Co.

It is extremely important to have quality feeds to get the laying birds to do their job well. They must be fed right during the starting and growing period. They must be fed right when in production. But on no account should we be blind to the fact that the bird's environment can make or break an operation. Let's disregard feeds for a moment. Let's concentrate on the bird's comfort.

TEMPERATURE — Chicks, pigs, layers—they all respond to the right kind of temperatures. U.S. Department of Agriculture data of many years back show rather conclusively that the ideal temperature for starting chicks is 90-95°. Off-base temperatures definitely have a stunting effect.

But what about the growing chicken? Not until recently have we had some really good data showing the importance of providing adequate heat for the growing chicken. Notice from the data below that Maryland workers found five to eight weeks growth gains to be cut over 0.25 lb. when a temperature of 50° was maintained rather than the ideal temperature of 75°. And feed efficiency was also hurt badly. It took over 0.75 lb. more feed, per pound of gain, for the 50° birds than it did for the 75° birds.

Temperature and Its Effect on Growth of Birds

	50°	75°
Gain 5-8 weeks (lb.)	0.91	1.17
Feed conversion (lb.)	2.88	2.09

Connecticut workers have found much the same story to be true. In a comparison of 45° temperatures with 65°, there was a weight loss of 0.07 lb., and feed conversions were over 0.25 lb. poorer under conditions of the chilly (45°) temperature.

"Truly academic," you say. No indeed. There are just a lot of replacement bird growers, yes, and even broiler growers, who turn the heat off too early; even during very cold weather, they'll have the heat off by the time the birds are around five or six weeks of age. That's poor management.

Recently I had the good fortune of visiting with Monroe Babcock, poultry authority, Babcock Poultry Farm, Inc., Ithaca, N.Y. Mr. Babcock and I got to talking about this matter of heat for replacement birds. Mr. Babcock made no bones about it. He said that birds could decidedly be ruined by taking the heat off too soon. And he showed me some birds to prove it. These were 13-week old birds. Despite real cold winter weather, the grower had turned the heat off when the birds were six weeks of age. Those birds looked pretty rough. Mr. Babcock was afraid they'd never come out of it. To safeguard against this thing happening in the future, here's a heat-off schedule which is currently being recommended by Babcock Poultry Farm:

Date of batch	Age that heat may be safely turned off
Oct. 1 to Feb. 1	12 weeks
Feb. 1 to March 1	10 weeks
March 1 to April 15	9 weeks
April 15 to May 1	7 weeks
May 1 to June 15	6 weeks
June 15 to Sept. 1	8 weeks
Sept. 1 to Oct. 1	10 weeks

We find that Shenandoah Valley broiler growers usually grow broilers more efficiently than do Delmarva growers. We believe one reason for this is because the Shenandoah folks keep the heat on their birds longer.

EDITOR'S NOTE: *This article was first presented by Dr. Snyder, director of poultry research, Beacon Milling Co. division of Spencer Kellogg & Sons, Inc., at a recent Beacon egg-feeds-poultry seminar. Means of increasing profitability were stressed at the meeting.*

It's not unusual for them to have a little heat on the birds right up to market time.

With pigs, as with chickens, tem-

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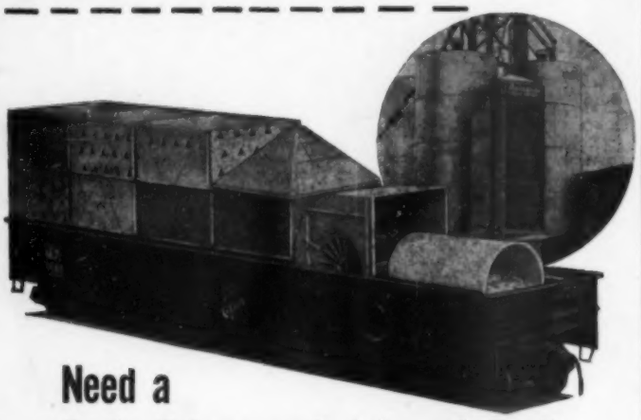

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peratures can make a whale of a lot of difference. For example, at 30°, pigs 50 lb. and heavier performed 20% less efficiently than they did at 60°. High temperatures are also bad. At 94°, their rate of gain was 15% below that of the 60° pigs.

Layers too suffer when the temperatures aren't right. USDA data show that when laying house temperatures drop from 55° to 35°, average egg production drops from 74% to 55%.

The practical poultryman quite justifiably asks: "What does this temperature thing mean in my on-the-farm operation?" So far as replacement birds and broilers are concerned, we have already answered that question: "Keep the heat on a little longer."

In the case of layers, we are recommending first and foremost the construction of well-insulated poultry buildings. The insulation value should be a minimum of six in the side walls, and eight in the ceiling.

At the Beacon Poultry Research Farm, we are now doing work with an experimental laying house in which the insulation value in the side walls is 14, and in the ceiling it is 16. Even without supplementary heat, we have found the temperature to be maintained at a near ideal level for our layers. In last winter's zero weather, the temperature in this "environment controlled" laying house did not go below 42°. We have no windows in this house. Quite a lot of heat may be lost through windows. We rely on the body heat of the birds to keep the inside temperatures up; we rely on the insulation to keep the cold out.

We believe that in the future, more and more "environment controlled" houses will be constructed. The increased rate of lay, and improved feed conversions will pay for the additional cost of the building.

Supplementary Heat

A second way egg producers are fighting to keep good winter time temperatures in their poultry houses is through the use of supplementary heat. Recently I was on farms of two very successful egg producers in Pennsylvania; these men never allow the inside temperatures of their laying houses to drop below 50°. They have found that the use of supplementary heat pays dividends for them.

Two other facets of this temperature thing are deserving of the poultryman's attention: (1) There is a considerable difference in laying strains and their ability to withstand high or low environmental temperatures, and (2) feeds should be formulated differently during cold weather than during hot weather.

Recent work by Dr. Til Huston and his Georgia co-workers shows that Leghorns do a good job even at 90° temperature. Not so with New Hampshires and Rocks. On the other hand, it is well known that the heavy birds tolerate the cold Maine winters better than the light birds.

Under New York state conditions, Dr. Fred Hill has found that the energy concentration in a layer diet needs to be considerably higher during the winter than during the summer. Dr. Hill has reported that the efficiency of feed utilization, on a given diet, varies as much as 13% from the cold months to the hot months. His data point to the need for reformulation during different seasons of the year. Thus, a wide calorie-protein ratio should be employed during the winter months, a narrow calorie-protein ratio in the summer months.

In an experiment involving uniform laying house temperatures of 55-60°, compared with normal laying house temperature fluctuations, C. F. Petersen, Idaho, found that the 55-60° temperatures resulted in 3% better egg production and 10% better feed efficiency.

AIR MOVEMENT — The evidence mounts high that sufficient air movement will help cut down on CRD. Early work reported by Dr. Erwin Jungherr when at the University of Connecticut showed that birds didn't get CRD when they had 3 cu. ft. of air per bird per minute. And there is some recent evidence showing that it's very difficult to infect a flock with bronchitis if there's plenty of air movement in the pen.

Plenty of air movement shouldn't be construed to mean that it's O.K. for the birds to be in a draft—nor that it's O.K. to chill them. And, yes, providing plenty of fresh air is likely to increase the fuel bill. But the increased fuel bill will be more than offset by keeping the birds healthy — relatively free of CRD.

We consider 1⅛ cu. ft. of air per layer per minute to be a bare minimum. Three is recommended. And in one of our new experimental units, we're equipped to deliver 10 cu. ft. of air per layer per minute. That means 24 complete air changes per hour.

When it comes to ventilating a laying house by the conventional gravity system, there are no hard and fast rules. Knowing how to adjust the windows of the laying house, and when, is a part of the "green thumb" of poultry production.

Prof. James Wright, Cornell University, used to say, "Some people don't have the right breath for chickens." Adjusting the ventilation is one of those "right breath" things. Some poultrymen know when and how to do it—and, more importantly, they will do it. Other poultrymen won't. After all, it does take considerable effort.

At the Beacon Poultry Research Farm we find that mechanical ventilation systems are much better than the old-fashioned gravity systems. We prefer the pressure system to the pull-out system. A modification of the sanctuary system, using a 12 in. duct with holes every 22½ in., has proved best for us.

CROWDING — We stick by our guns: Don't crowd. A recent report from Massachusetts shows that egg production was 5% poorer when allowing only 1 sq. ft. per layer compared with 2 sq. ft. There was no difference in production, however, when comparing 2 sq. ft. with 3 sq. ft. All birds were on slatted floors.

Data from Nebraska tell the same story. In a university trial, Leghorns on litter, receiving 3 sq. ft., were compared with their sisters on slats, 1 sq. ft. per bird. Hen-housed egg production was 7% better for the birds on litter. Mortality for the birds on litter was only 2.4%; it was 7.2% for the birds on slats. There were many more less-than-50-eggs birds on the slatted floors (15%) than there were on the litter floors (7.1%).

Pennsylvania State University has compared conventionally housed lay-

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ers, 3 sq. ft. per bird, with birds in a solar house, 1 sq. ft. per bird. After approximately 15 months of lay, they found the hen-housed egg production to be 5% poorer for the crowded birds. Also, the crowded birds took 0.2 lb. more feed per dozen eggs produced.

Dr. H. S. Siegel, now at Virginia, obtained 41% more eggs from birds housed at 4 sq. ft. than for those housed at 1½ sq. ft. Not only did more of the plenty-of-floor-space birds lay, but also those that laid laid more.

Dr. Siegel found symptoms of physiological stress among the crowded birds. The adrenal glands of the crowded birds were considerably larger than those of the birds getting plenty of floor space. Enlargement of the adrenal glands is associated with physiological adjustment to stress.

Incidentally, some data show that birds crowded on litter floors do just as well as birds crowded on slats. But neither do as well as the uncrowded birds.

Problem of Peck Order

Under conditions of crowding birds, one of the major problems seems to be that of peck order. Excessive crowding makes it difficult to establish peck order; more birds meet more strangers, and the result is constant turmoil.

In the 1957-59 studies at Pennsylvania State University, it was found that 60% of the mortality among the crowded birds was due to cannibalism. Total mortality in the crowded-bird house was 22.2%, compared with 16.4% in the conventional house. The entire difference in mortality could be accounted for by the difference in mortality due to cannibalism.

Field reports from Canada indicate that birds on either slat or wire floors require different housing conditions than birds on conventional floors. Thus, the Canadians have found it advisable to cut down drastically on the window area when housing birds on wire or slats. Less light has the effect of cutting down on cannibalism and quieting the birds.

Also, the Canadians have found it advisable to add ventilation openings at levels below the slats or wire floors. Ventilators at this level allow the ammonia fumes from the manure to escape more readily, and also the below-floor-level ventilators hasten drying. This cuts down on the fly and odor problems.

Still another aspect of crowding which should not be overlooked is the matter of big pens vs. small pens. The Australians think we're a little crazy because we put so many birds in a single pen. Perhaps they are right. Surprisingly little experimental work has been done on the matter of large vs. small pens.

Data from Pennsylvania State University show that the small-pen birds lay a whopping 8% better (hen-housed basis) than the large-pen birds. Mortality was only one third as great in the small pen as it was in the large pen. In the Pennsylvania work, 65 birds were kept in the small pen compared with nearly 1,000 in the large pen. A break in laryngotracheitis confounded the Pennsylvania data.

Not only must plenty of floor space be provided, but it is also important to have plenty of feeder space, water space, roosting area and an adequate number of nests. Below are Hy-Line data showing the importance of plenty of feeder space. Bob Wallace of Hy-Line says that the records on which these data are based were obtained under average farm conditions.

Feeder Space

Inches of feeder space per bird (counting both sides of feeder)	Reduction in average egg production compared to flocks with 6 in.
6	0 eggs
5	7 eggs
4	16 eggs
3	25 eggs
2	42 eggs
1	74 eggs

It will be noted from the above that there was a loss of over 2 doz. eggs per bird when only half enough feeder space was allowed. For a man

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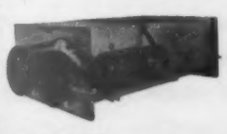

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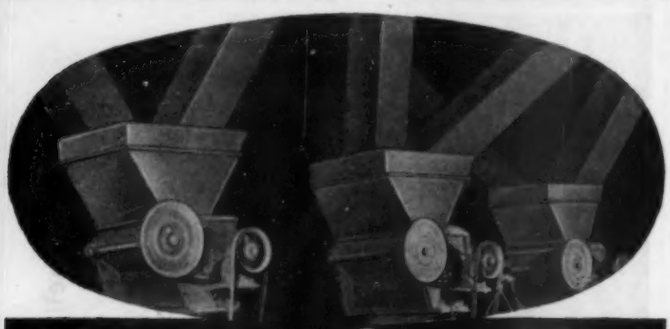

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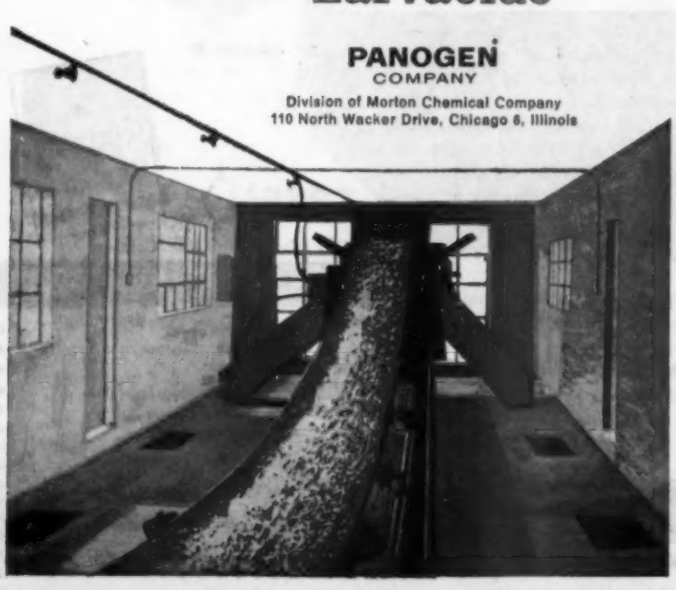

SELLIN' SAM By Jim Zilverberg

"He's a fake! I looked in his briefcase and there's nothing but papers in it!"

with a thousand bird flock, that means a loss of about $600 per year.

Below we have somewhat the same story for waterer space. Again, these are Hy-Line data.

Waterer Space

Number of watering sites per 100 birds	Reduction in average egg production compared to flocks with 1.2 watering sites
1.2	0 eggs
1.0	4 eggs
.8	9 eggs
.6	14 eggs
.4	20 eggs
.2	33 eggs

Two tenths of a watering site per 100 birds would be the same as two 4 ft. waterers per 1,000 birds. And there are a few poultrymen who have only that many waterers. Notice that there was a loss of nearly 3 doz. eggs when the watering space was cut to two sites per 1,000 birds. That's about $900 per year for 1,000 layers.

TRANQUILIZERS — Tranquilizers apparently offer a bit of a buffer to the effects of adverse environment. At least this seems to be true where high temperatures or crowding are the environmental culprits.

A recent report by Dr. H. S. Weiss, Rutgers, showed birds to lay 5% better when fed the tranquilizer, Serpasil, during the summer months. Also, in a second experiment, Dr. Weiss found that Serpasil-fed birds performed better at 95° than did the non-medicated control birds.

Arizona workers found that crowded birds fared better when given Serpasil. In a 90-day layer test, birds on 1.09 sq. ft. of floor space laid 8% better than the crowded controls receiving no Serpasil. In addition to this study, the Arizona workers also found that Serpasil increased egg production by 15% or more during the hot summer months (and it does get hot in Arizona).

Why the tranquilizer-fed birds should do a better job under conditions of stress is a moot question. It is known, for example, that the tranquilizer reserpine (Serpasil) reduces blood pressure and in this way protects turkeys from aortic rupture (a highly fatal syndrome). And, of course, the tranquilizer may have the effect of making our poultry more at peace with the world. The layer just doesn't care if it's hot or if it's crowded. In fact, she doesn't seem to even care where she lays her eggs.

Dr. R. E. Burger, Minnesota, has reported that birds on high levels of reserpine lay more floor eggs. At the highest level studied, it was found that the birds laid 16% floor eggs.

Feed-use of tranquilizers has been cleared by the Food and Drug Administration for use in certain layer, grower and turkey feeds (but not in combination with other medicinals). No doubt they can be used advantageously by poultrymen in combating stress. In particular, it seems evident that turkey growers will use tranquilizers to combat aortic rupture.

Under normal conditions, tranquilizers do not improve egg production or feed conversions. In fact, there is some evidence to indicate that under normal conditions tranquilizers may have a depressing effect on the productivity of the hens.

LIGHTING—The problem of lighting layers, as well as replacement stock, is now receiving a good bit of attention by research workers. While much good work has been done, no one has come up with conclusive data showing that any system is better than the old conventional 14-hour-per-day lighting regime. This has been the standard recommended lighting schedule for layers for years —recent work by Cornell and New Hampshire shows it to still be the program of choice. Connecticut has obtained somewhat better production using all night lights. Additional studies are needed to nail down an answer to the all-night vs. standard-lighting practice.

Years of observation by practical poultrymen have taught them that lighting can make a great deal of difference in the maturity rate of pullets. Pullets hatched in the late fall, coming into production in the springtime period of increasing daylight, come into production early. On the other hand, late spring birds, maturing during the shortening days of the fall, come into production late.

Most poultrymen would rather have their birds come into production a little late—after they have reached more complete physical maturity. And while we know that the bird can be made to come into

Ralph is ready. *Are You?*

See page 41

production later, by restricting the light to say six hours a day during the growing and developing period—most poultrymen do not have the windowless houses needed to control the amount of light received by the birds. It seems likely, however, that tomorrow's poultry industry will see more windowless houses; they have proved satisfactory for layers.

CLEANLINESS — Recently there has been a great re-emphasis on the importance of sanitation to profitable poultry production. This has been brought about largely because of high condemnation rates under poultry inspection. For example, the March, 1960, condemnation rates ran an alarming 3%. These high losses have sent poultry producers back to the old poultry textbooks—checking for sanitary procedures which will cut diseases and therefore whittle down the large number of throw-outs.

It has been known for a good many years that chicks perform much better in a clean environment than in a dirty environment. At the University of Illinois, we observed that depopulating, cleaning and fumigating the chick battery room resulted in a growth improvement of 5%. Likewise, we have observed this at the Beacon Poultry Research Farm.

Recently, Dr. M. H. Edwards, Jr., Georgia, reported growth improvements of up to 20% as a result of thoroughly cleaning and fumigating the chicks' quarters. Dr. Edwards also found that birds had a greater need for certain critical feed nutrients when grown under contaminated conditions than when grown in the freshly cleaned chick room. (Hence, the evident need for feed manufacturers to incorporate a liberal overage of critical nutrients into their commercial formulas — most birds grown under field conditions obviously do not get the best in sanitation practices.

While good poultrymen clean their waterers daily, there apparently are no experimental data showing just how important this practice is. It is known that certain harmful fungi do have an adverse effect on growth and productivity. Thus, Ohio workers have reported the occurrence of a prolapsed condition in swine, apparently resulting from the feeding of fungus-contaminated corn. The workers report the occurrence of this syndrome much more frequently in wet corn years than during normal years.

Good poultrymen practice sanitation. It makes sense. There should be a complete cleanup between every flock of birds. Damp, dirty litter makes a nice environment for a number of poultry diseases and parasites; it makes a poor environment for birds. We cannot answer yet whether or not a dirty litter condition causes birds to be pyschologically upset and therefore lay less. If there is indeed a bit of a psychological upheaval resulting from a dirty environment (housewives have been known to suffer such upsets), perhaps tranquilizers may be used to some advantage.

ABRUPT CHANGES—Good poultrymen know that birds respond to a constant environment. They get riled easily if anything goes haywire. Every effort should be made to keep out of the life of the layer such things as: abnormal noises, lights or interruptions in the feeding program.

Ralston Purina Co. Tells of Transfers

ST. LOUIS—A series of transfers of personnel has been announced by the Ralston Purina Co.

Fred Raunikar, superintendent of the Ralston Purina plant at Visalia, Cal., has been named superintendent at the company's Wichita, Kansas, plant, it has been announced by David L. Grant, manufacturing vice president.

Mr. Raunikar will be replaced at Visalia by Harold Byars, night foreman of the company's Stockton, Cal., plant.

George J. Myers, Ralston division engineer at company headquarters, will go to the Battle Creek, Mich., plant as power engineer.

John R. Wright, eastern division engineer of the headquarters staff, is transferred to Ralston division engineer of the headquarters staff.

Walter W. Wissmann, superintendent at the Richmond, Ind., plant, will become eastern division engineer, headquarters staff.

Chester H. Karger, superintendent of the Louisville, Ky., plant, was named superintendent at Richmond, Ind.

Robert H. Holt, general foreman at Circleville, Ohio, was named superintendent at the Louisville Chow plant.

All transfers become effective Aug. 1.

Enlarge Arkansas Experiment Station

FAYETTEVILLE, ARK.—The University of Arkansas' Agricultural Experiment Station has entered into a long-term lease for 1,000 acres of land with Lloyd Spencer of Hope, it was announced by Dr. John W. White, vice president for agriculture. The lease on the tract of land located a short distance from the present headquarters of the Southwest Branch Experiment Station becomes effective Jan. 1.

The 1,000-acre site consists of 320 acres of bottomland, 503 acres of upland pasture and meadow and 177 acres of pine forest.

The program being developed for the land being acquired from Mr. Spencer will deal largely with beef cattle and forestry research. Since the beef cow herd is becoming an increasingly important part of the economy of Southwest Arkansas, emphasis will be on cow and calf programs.

Objectives in the beef cattle research will include studies of the importance of protein, vitamin and mineral supplements in cow and calf nutrition; the management of adapted forage species so as to provide year-round optimum nutrition for cow and calf; the use of insecticides and vermicides, and the relationship of economy of production to animal and forage management practices.

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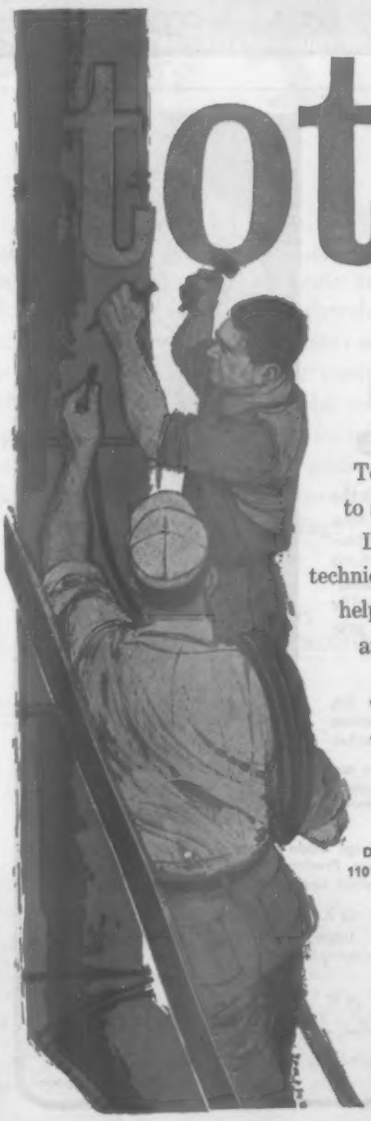

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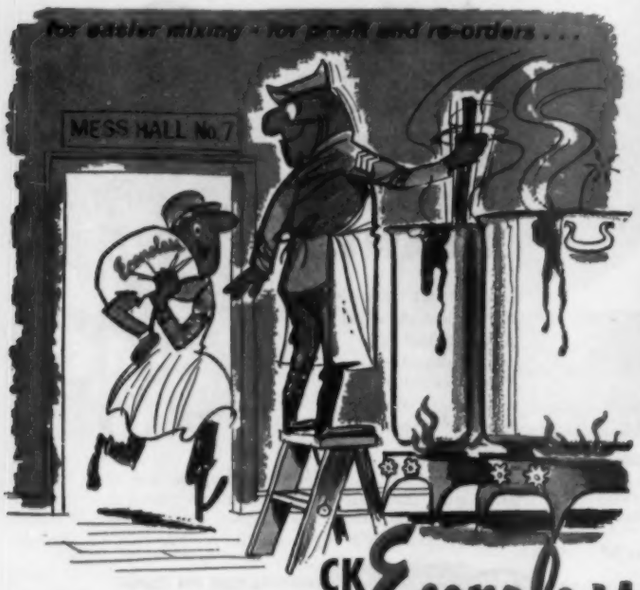

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QUADRUPLET CALVES—Four Hereford calves, two of each sex, are reported doing fine on the Knutson Brothers farm, Ortonville, Minn. Scientists estimate that the incidence of birth of quads is one in a million and the incidence of survival is far greater. The calves, weighing between 20 and 25 lb. at birth, are shown by Larry Blanshan, a neighbor, and Barbara Knutson, daughter of Mr. and Mrs. Arnold Knutson.

Kentucky Egg Law Requires Grading, Sizing According to USDA Standards

FRANKFORT, KY. — Kentucky's new egg law has gone into effect, supplementing one that has been on the books since 1957 but which has not been effective, according to reports from the state.

The new law says that eggs to be offered in retail trade are to be graded and sized according to USDA standards and labeled with information giving the grade and size.

All retailers, handlers, dealers and wholesalers are required to have a license. Those excepted are farmer producers who sell their own eggs; hatcheries dealing exclusively for hatchery purposes; hotels; restaurants; bakeries; confectionaries; ice cream manufacturers, and consumers.

A farmer is excepted so long as the eggs he sells are produced on his farm from his own flocks.

The license must be secured from: Division of Markets, Department of Agriculture, Frankfort.

Should Be Candled

All eggs should be candled before they reach the consumer, except those producers are selling direct to consumer.

Another provision that caused quite a bit of concern was grocers buying country eggs from producers. If he is going to resell them over the counter to the retail trade, he must have them graded and sized. However, he can dispose of them to wholesalers without having them graded and sized.

All eggs bought or sold by or to any egg handler must bear a 2¢ inspection feed stamp for each 15 doz. lot or portion thereof. The stamps are purchased from the Division of Markets, Department of Agriculture, Frankfort.

Correct Labeling

Bulk or loose quantities may be handled as long as the right labeling is used. Bulk eggs should be labeled as to size and grade with one half inch or larger lettering. For example, the labeling can be done by placing a poster bearing the right lettering above the eggs.

On carton eggs, the size of the letters denoting the grade and size should be in one fourth inch or larger letters.

Some sources grade and size at the farms and the new ruling is that these can be sold by stores without further grading, provided a 2¢ egg stamp has been affixed for each 15 doz.

Plans are to have egg grading schools held in various sections of the state, if the demand merits it. The schools are being arranged by the various extension service offices.

Uncle Johnny Mills Hires Area Manager

HOUSTON, TEXAS — James G. Rhoden, Brookshire, Texas, has been appointed territory manager for Uncle Johnny Mills of Houston, reports the company's sales manager, Lou Loftiss.

James Rhoden

In this capacity, Mr. Rhoden will handle sales and distribution of cattle, poultry and hog feed in an area southwest of Houston.

A native of Baytown, Texas, Mr. Rhoden is a former student at Texas A&M College. He has served as a ranch manager of the Rue Ranch in Simonton, Texas, a ranch manager in San Antonio, Texas, a livestock poultry supervisor for the Texas Prison System, and an independent cattleman.

Dairy Cow Additive

PETALUMA, CAL. — A culture-type feed additive, "Breedexx," is being used more and more, say local retailers. The additive is used to cut down mastitis and improve the appetites of dairy cows.

The product was first placed on the market four years ago. Produced at Hill's Mills, the additive is supplied by the Golden Eagle Milling Co. and the G. P. McNaer Co., both of Petaluma.

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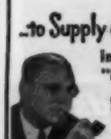

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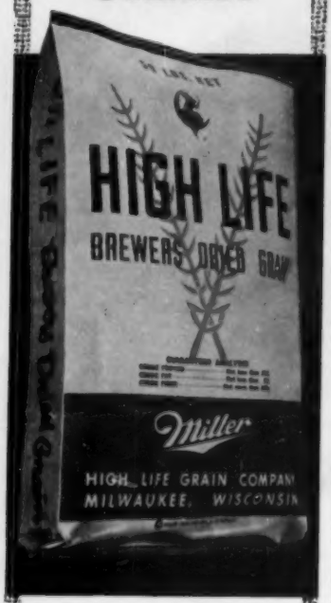

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Cost Study–Part I

Relation of Comparative Costs to Structural Trends in the Feed Industry

By Dr. Richard Phillips
Iowa State University

Anyone connected with the feed industry will agree that this is one of the most dynamic industries in the United States. Feed manufacturers and dealers must be constantly alert to trends and developments, and be prepared to adjust to them. It seems as though feed companies barely get started adjusting to one trend when it becomes necessary to begin adjusting to another.

Several major trends in the industry are apparent now. Others seem to be looming on the horizon. The overall industry trend is toward more and smaller manufacturing plants, located closer to feeders or dealers.

In terms of firm structure, many smaller manufacturers are merging with larger companies. An increasing number of farm mixing facilities are being installed by large feeders. The southern broiler type of feeder contract (under which the manufacturer or dealer assumes the farmer's price risk) is on the decline in the Midwest.

But finance programs with tie-in arrangements for breeder or feeder stock and for market outlets are on the increase. Purchases of premixes, both by dealers and by farmers, seem to be on the increase.

Economic Forces

What are the economic forces that are bringing about these trends? There are several of them. One such force is made up of what is commonly called "technical innovations." These innovations include new developments in nutrition, in milling and handling methods, in the production of feed ingredients.

Another economic force is brought on by shifts in demand because of changes in regional production patterns, changes in the size and organization of farms, and changes in consumer demand for meat and other livestock products.

A third economic force comes about because of potential cost savings by certain kinds of organization in the manufacture and distribution of feeds. These different economic forces are interrelated, and all of them have important consequences for feed manufacturers and dealers.

The study by Iowa State University and the USDA upon which Marketing Research Report No. 388 is based was designed to provide information on the third kind of economic force affecting the feed industry.

Specifically, the objective of this study was to compare four alternative types of organization in the feed industry in terms of overall cost for manufacturing and distributing feeds to farmers. So while each feed company must consider its own cost structure as well as forces arising from innovations and from demand changes, the results of the study do shed some light on the trends and adjustments affecting the feed industry.

Comparison of Costs

The study encompassed a comparison of the total cost of manufacturing and distributing feeds among the four different types of organization. The costs include both the manufacturer's costs and the retailer's costs. They include the delivered total net costs of ingredients, procurement costs, production and plant costs, sales costs, transportation costs, and overhead costs.

The four types of operation studied include (1) premix, (2) concentrate, (3) complete feed and (4) retailer-manufacturer. Under the premix operation, both proteins and grains are added by the retailer to formulate the complete feed from the manufacturer's premix. The complete feed is milled under the premix manufacturer's formulas and sold under the premix manufacturer's brand.

Under the concentrate operation, the grain is added by the retailer according to the concentrate manufacturer's formula and the resulting complete feed is sold under the manufacturer's brand.

With the complete feed operation, the entire feed is formulated by the manufacturer, and is sold by dealers without further mixing. The retailer-manufacturers formulate the complete feed from the ground up and sell it directly to farmers under their own brand.

A summary comparison of the costs under the four types of operation is given in the accompanying Table 1. The total per-ton costs for manufacturers and retailers combined (bottom of table) for the identical feed was $93.03 for the premix operation, $91.48 for the concentrate operation, $93.71 for the complete feed operation, and $89.02 for the retailer-manufacturer operation.

Thus, it cost the industry $4.69 more per ton to manufacture and deliver every ton of completed feed under the complete feed system than under the retailer-manufacturer system. As compared with the retailer-manufacturer operation, the premix manufacturers and retailer mixers have a cost disadvantage of $4.01 per ton and the concentrate manufacturers have a cost disadvantage of $2.46 per ton.

Cost Breakdown

The cost breakdown in Table 1 deserves careful study to see how these differences in total cost come about. Retailer-manufacturers have higher production and plant costs than any of the other manufacturers. But their production costs are much less than those of retailers who do mixing (the first two types of operation). They even come out better on production cost than the complete feed operation when the plant and handling costs of the retailer are added in.

Because of their relatively lower total tonnage, total sales costs are higher for the retailer-manufacturers than for any of the other types of operation. The premix operation is the most economical organization as far as sales costs are concerned.

The total transportation cost of getting the feed to the farmer who uses it is almost identical under the premix operation and the retailer-manufacturer operation. Both are lower here than either the concentrate operation or the complete feed operation. These differences are fully explained by differences in the tonnage and the distance of feed transportation required by the four types of operation.

Overhead costs (including procurement and research costs) are lowest

EDITOR'S NOTE: Feedstuffs previously summarized the highlights of the recent USDA Market Research Report No. 388, "Costs of Procuring, Manufacturing and Distributing Mixed Feeds in the Midwest." In the accompanying article, the author of this bulletin, Dr. Richard Phillips, agricultural economist at Iowa State University, gives some additional insights and implications of his study for the feed industry. Dr. Phillips, named a professor in 1959, is the author of a book on farm store and elevator management, "Managing for Greater Returns," and other material relating to the field of farm business management. His contributions to the field of agricultural marketing and to agricultural trade groups are numerous and varied. A native Iowan, Dr. Phillips has conducted numerous workshops and studies relating to agricultural marketing. This article is one of a series. Other installments by Dr. Phillips will appear in subsequent issues of Feedstuffs.

Dr. Richard Phillips

TABLE 1. Comparison of Per Ton Costs for Four Types of Feed Operation*

	Type of Operation			
	Premix	Concentrate	Complete Feed	Retailer-Manufacturer
Production Cost				
To manufacturer	.40	4.68	8.25	9.25
To retailer	17.46	9.82	2.17	....
Combined	18.06	14.50	10.42	9.25
Sales Cost				
To manufacturer	1.50	2.75	4.86	8.25
To retailer	1.91	1.91	1.91	....
Combined	3.41	4.66	6.77	8.25
Transportation Cost				
To manufacturer	.38	1.80	3.16	2.28
To retailer	1.88	1.82	1.80	....
Combined	2.26	3.62	4.96	2.28
Overhead Cost				
To manufacturer	.99	2.61	4.75	4.75
To retailer	3.29	3.29	3.29	....
Combined	4.28	5.90	8.04	4.75
Total Cost Without Ingredients				
To manufacturer	2.47	11.84	21.02	24.57
To retailer	24.54	16.84	9.17	....
Combined	28.01	26.68	30.19	24.57
Ingredient Cost				
To manufacturer	13.12	40.16	63.52	64.49
To retailer	51.90	22.64	....	....
Combined	65.02	62.80	63.52	64.49
Total Cost Including Ingredients				
To manufacturer	16.59	52.00	84.54	89.02
To retailer	76.44	39.48	9.17	....
Combined	93.03	91.48	93.71	89.02

*On basis of final complete feed equivalent.

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under the premix operation and highest under the complete feed operation. But in spite of their smaller total tonnage, overhead cost per ton is relatively low for the retailer manufacturers.

Ingredient costs (for the identical formula) are lowest under the concentrate operation, and highest under the premix operation. Delivered ingredient costs are affected by the required distance of shipment, but also by buying power. Because they place orders in larger quantities and take a larger percentage in bulk, manufacturers buy ingredients other than grain more cheaply than retailers.

In the Midwest, retailers buy grain directly from farmers, securing it more cheaply than manufacturers. With the manufacturers buying all ingredients but the grain, the concentrate operation comes out best here. Retailer manufacturers have to pay somewhat more because of their smaller volume and lesser buying power.

In the case of the premix operation, the retailers have relatively little buying power on proteins. This offsets the manufacturer's buying power on premix ingredients and the retailer's direct buying of grain under this type of operation.

Trend Implications

The comparison shown in Table 1 provides some helpful information in relation to the industry trends outlined above. Some of these include:

Merger of smaller manufacturer firms with larger companies — This trend would appear to be based on factors other than cost disadvantages. Inadequate capitalization, added risk because of little or no diversification, and difficulties of selling or transferring to heirs the assets of independent companies appear to be major factors bringing about such consolidation. A contributing factor no doubt is the availability of relatively attractive offers by the large companies looking for opportunities for expansion and diversification.

Trends toward premixes — According to the last line of Table 1, premix operations appear to have a cost disadvantage. But this is primarily because of the high production costs to the retailer mixers. If these retailers (or large feeders) can increase tonnage so as to cut per ton production costs, the premix operation might well have a $5 per ton cost advantage, even over retailer-manufacturers. It would seem that the greatest need for the concentrate and complete feed operations in order to compete cost wise with such developments would be to reduce overhead costs.

The high transportation cost because of the extra ton miles of haul required creates another problem under the complete feed operation. This last factor should further the trend toward ownership of decentralized mills by major manufacturers.

Named by Clute Corp.

LITTLETON, COLO. — The Clute Corp. here has announced the appointment of Arnold C. Bishard as agricultural engineer. According to John H. Lowell, president, Mr. Bishard will be in charge of engineering and sales development for the Clute grain cleaner, air conveying systems and other Clute air separation equipment for agriculture.

Mr. Bishard is a 1960 graduate of Colorado State University, Fort Collins. His position with the firm is a newly-created one.

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JOE BROOKS

BY AL P. NELSON

Joe Learns a Lesson

A tall, lean man in grey shirt and slacks—his blond hair quite heavily pomaded—came into Joe Brooks' salesroom. He was smoking a cigar, and as he lifted it to his mouth, a big ruby ring was very noticeable. The man was Ole Anderson, the local baker.

"Hello, Ole," greeted Milt Peters. "Know any good Scandihoovian stories today?"

"Yah, sure, I know some good stories," Ole said, "but I ain't gonna waste Joe's time tellin' a story while you listen. I got hired help myself, by golly, and I like to keep them vorking, too."

"Well, if you're waiting to see Joe, you might as well tell me a story," Milt encouraged. "There's a salesman with Joe, and he's a windy one. And there are no customers at the mill right now. I haven't got anything to do."

"Okay, then," Ole said, flicking the ashes from his cigar. "This feller Yonny, yu know, in last vorld vor he didn't want to get drafted. So ven he vent to have his physical he vas thinkin' hard, and ven the doctor tested his eyes, he said to Yonny, 'Read that shart on the wall.'

"Yonny blinked and said, 'Vat shart?'

"The doctor, he got a red face, and yelled, 'The shart on the vall there!'

"Yonny looked again and said 'Vat vall?'

"Holy cow!" said the doctor. "Vat terrible eyes; 4-F for yu, Svenska."

"So Yonny, he went to a burlesque show down the street to celebrate, yu know. The theayter vas pretty full, but Yonny managed to get a seat near the back. Ven the dancing girls came on, Yonny, he clapped harder than anybody else.

"Then in the intermission, the lights came on, and Yonny looked around and his blott froze. Right next to him sat the draft board doctor who had examined him. And he looked mighty cross, yu know.

"Vell Yonny, he started to think pretty hard. Then he leaned slowly over to the doctor and said, 'Excoose me, sir, is this the bus to St. Paw1?"

Asks for Encore

Milt laughed loud and long, and so did Ole, particularly when he observed how well his joke had gone over. At this moment the salesman came out of Joe's office. Hearing loud laughter, he looked quizzically at the two men, then went his way.

"Well, Ole," chuckled Milt, wiping tears from his eyes, "Joe probably can see you now. Tell him this Yonny joke."

Ole shook his head. "No, I have made a rule to tell this joke only vunce a day. If I tell it too many times, it loses its flavor.

Stepping sprightly in the manner of his race, lanky Ole went into Joe's office. "Hullo, hard vorker," he smiled, noting Joe was going through a stack of magazines. "You look busy."

Joe smiled. "Hi, Ole. Yeah, competition is tough nowadays in the feed business. A man has to keep his nose to the grindstone to stay in the race. Isn't that true in the bakery business, too?"

Ole took his cigar from his mouth. He didn't seem to be in a hurry. "Oh, I don't know, Joe. I used to think so, but not any more."

Now it was Joe's turn to be surprised. Ole Anderson had the reputation in Hansen's Creek of being a hard working baker who put in long hours, who never had time for community projects, a man who drove his employees quite hard. A different, more relaxed Ole stood before him.

"What made you change your mind, Ole?"

Be Nice to People

Ole laughed. "Vell, I got smart and figured yu have to twist people around your little finger by bein' nice to them, yu know. If they see yu are too busy vit your own vork, they think you're vorking so hard just to think up something smart to get more money outa them."

Joe blinked and leaned back in his swivel chair. This was a startling philosophy from such a previously self-centered man as Ole.

The big Swede chuckled. "One of my clerks sold a woman 11 doughnuts for a dozen vun day, Joe. Ven she vent out and told all her friends about it, my business suffered."

Joe was sympathetic. "It could happen."

"So vun day I sent her a dozen

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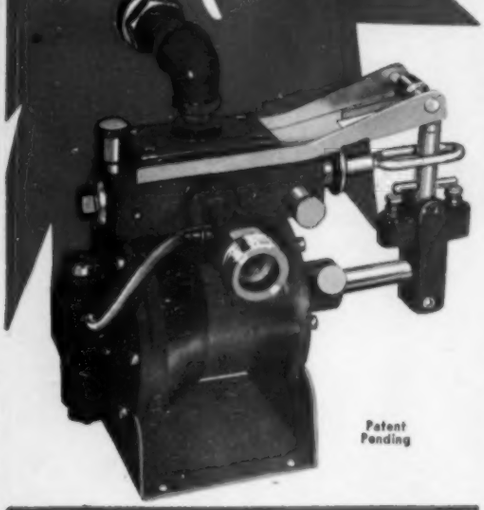

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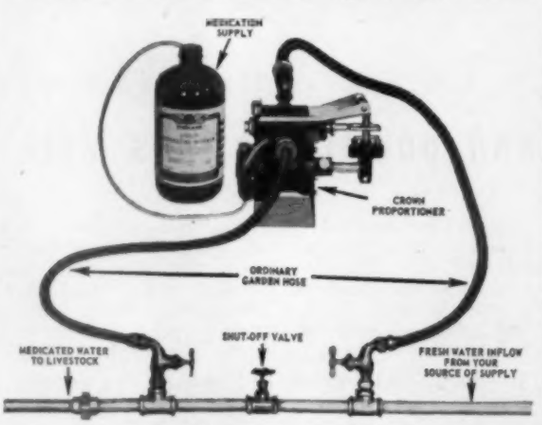

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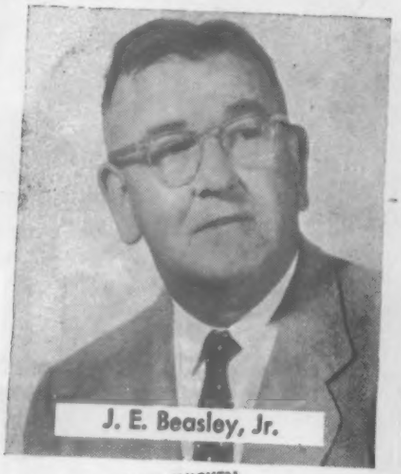

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fresh doughnuts, still hot from the oven, Joe, vit a note, 'From Ole.' And you know vat? She's been boosting me ever since."

Joe nodded. "Good public relations."

"So now I learned," Ole grinned. "Every dozen doughnuts I sell I stick in the 13th and don't say nothing to nobody. And, Joe, am I selling doughnuts. Aye have tripled my doughnut business in vun month."

Joe smiled. "Can you afford that 13th doughnut on so many orders?"

"Can I afford to advertise?" Ole countered. "Me and my men are proud of our doughnut business. I think ve make them better now. I have some little cards printed and slip one in every bag. Here's vun."

He handed the colored paper slip to Joe. The feed man glanced at the copy. "Eat Ole's Wonderful Doughnuts. Even the hole tastes good."

Joe began to laugh. "Very good copy, Ole. That's real merchandising of doughnuts, when you can sell the hole, too."

"Yah, sure, Joe. I have learned something about people. They like little favors. They like to be treated nice. And they like extras. Nobody ever comes back and complains to me that I give them 13 doughnuts for a dozen. They just come and buy one or two more dozen, yah?" The Swede's eyes twinkled.

"It's okay as long as you can afford to do it, Ole."

Proposition

"Yah, sure, I can. Now I would like to make a proposition vit yu," Ole said craftily. "Yu serve coffee to farmers. Aye know yu get lots of farmers here every day I never see in my bakery shop. So vun day a week for four weeks I would like to donate 100 of my doughnuts to yu to serve your customers. Maybe, Joe, yu could put up a sign, yu know, saying these doughnuts vas donated by me and I have lots more in my bakery cases." Ole's eyes gleamed in anticipation.

Joe laughed. "How can I turn down a deal like that?"

"And maybe yu could slip in a vord or two in your ad, Joe," Ole suggested, "saying that on a certain day, farmers who come for coffee can get one of Ole's vunderful doughnuts—if they come early enough. One hundred is all I can furnish free."

"You certainly have turned into a merchandiser, Ole," smiled Joe. "I hope you get to be doughnut king of the county."

Ole smiled with pleasure. "Joe, I am going to take more time now to think out things to please people, and I vil hire some Norvegians or Danes to knead the dough for me. This Svede is going to vork his head a little more. I can make more money that vay."

Joe looked at the new Ole in amazement. "Ole," he said, "you have given me an idea. Maybe I should try giving something away with every ton of feed I sell, perhaps on one day a month. It might please my customers and win some new ones for me."

'Young Roasters' Market-Tested

ITHACA, N.Y.—A newly-developed poultry product, "young roasters," may help solve a problem for housewives and boost the poultryman's sagging income, according to L. B. Darrah, Cornell University. He commented that now families which grow tired of frying chickens can get roasting chickens that are just the right size for one family meal.

The New York specialist, after the market test, indicated that there is a possible market of 2 million "young roasters" a week.

Development of the new product is an effort to increase the varieties of poultry products available. "Where many farm products have been developed and offered in recent years, the poultry industry has actually reduced the number of products it offers for sale," he said.

"Young roasters" is expected to be a market for fryers which have grown unusually large before the poultryman decides to market them.

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See page 41

Discuss Breeding at Servicemen's Clinic

MEMPHIS, TENN. — The role of breeding in poultry livability, egg quality, eviscerated yield, growth rate, egg production and general flock performance was discussed at the Poultry Servicemen's Clinic held here at the conclusion of the American Poultry & Hatchery Federation convention.

Attending the session were 175 persons from 30 states, Canada, Spain and Venezuela. Sponsor of the clinic was the Poultry Breeders of America, an organization of 28 of the nation's poultry breeders.

Research scientists of member firms conducted the clinic.

Dr. James Smith, Hubbard Farms, Walpole, N.H., said the three principal causes of condemnations in broilers are due to: Disease conditions, grower management and type of breeding. Processors list four major factors affecting meat yield as condemnations, body weight, body conformation and type of breeding stock. Again, breeding plays a lesser role than what many industry observers believe, he commented.

One of the servicemen's "heaviest duties" was outlined by Dr. Steven King, Mount Hope Division, Arbor Acres, Inc., Glastonbury, Conn. This is the field of management. He stated: "Management exposes many more factors for error than any other single item. Factors to be watched are floor space, ventilation, heat, lighting, feeding and disease control."

Along with good management, the best means of improving flock performance is through selection of a strain with an inherited potential for superior production, Dr. Gordon Dickerson, Kimber Farms, Inc., Niles, Cal., told the clinic.

Plans Announced for Cattle Feeders Day At Michigan State

EAST LANSING, MICH. — Ralph E. Schramm, manager of Old Home Farm, Jacksonburg, Ohio, will discuss his integrated breeding and feeding program as one of the features Aug. 18 of the 37th annual Michigan Cattle Feeders Day at Michigan State University.

Mr. Schramm manages a herd of about 200 cows on the birthplace of former Gov. James M. Cox of Ohio. He feeds from 165 to 175 home-grown steers and heifers each year. Many of his market animals are sold locally where he can follow the carcasses into the cooler and collect yield data for his records.

Another feature of Cattle Feeders Day will be a meeting of the Michigan Cattle Feeders Assn. during the noon hour. It will be conducted by Richard Van Vranken, president, Climax.

During the morning session, which will start at 10 a.m. in the Anthony Hall auditorium, visitors will hear reports of beef research in progress at the Michigan Agricultural Experiment Station. Topics to be discussed will include the value of different protein supplements, hay vs. no hay, shipping fever, high moisture corn, heat treated corn, silage digestion trials, breeding trials and carcass traits.

The final session of the day will be the outlook for the coming feeding season discussed by a member of the Michigan State agricultural economics staff. A beef lunch will be served at noon in Shaw Hall dormitory.

$60,000 LOSS IN FIRE

MONROE, GA. — Loss was estimated at $60,000 in a fire that swept through a chicken house at the Oscar W. Cunzey poultry plant four miles from here July 27. Firemen were unable to fight the blaze because of lack of water supply. The fire is said to have started near a large fan at the center of the 200-ft. long building.

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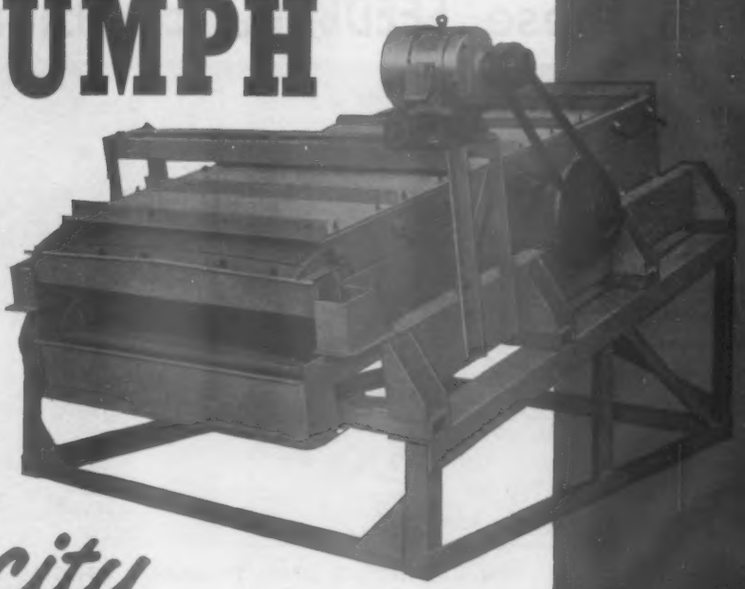

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Triumph "PE" Conveyor Action Scalping Screens give unequaled capacity, size for size, for any scalping, cleaning, grading, sorting and screening service. Their unique, perfect circle vibrating and conveying action permits corn, beans, cobs, oats, feeds, pellets and all similar products to be screened on wire cloth without wedging, plugging or blinding, assuring highly efficient operation and close sizing.

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Fully descriptive bulletins describing each of these Triumph products sent promptly on request. Write Today.

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Earnings Jump for National Alfalfa

KANSAS CITY — Net earnings of $258,146 were reported by National Alfalfa Dehydrating & Milling Co., Kansas City, for the fiscal year ended April 30, compared with a net loss of $960,266 in the preceding year.

In reporting to stockholders at the annual meeting recently in Kansas City, W. A. Donnelly, president of National Alfalfa, said that the improvement in earnings was due to streamlining of operations and increased efficiency which brought about a sharp reduction in expenses.

Among changes instituted by the present management which took over operations in March, 1959, were the closing of five high cost, marginal plants, addition of inert gas storage tanks at Independence, Kansas, and the completion of inert gas storage facilities at Blair, Neb. Administrative and sales organizations were analyzed and a substantial reduction made in total personnel. Main offices of the firm were moved from Lamar, Colo., to Kansas City, which consolidated sales, purchasing and administrative groups in one location.

Costs Reduced

The results of these changes were a reduction of about 14% in production costs and 20% in selling, general and administrative expenses, the annual report revealed. Operating income amounted to $532,228 in the past year, compared with a deficit of $331,649 in the preceding year. This was reduced by interest charges and provision for net loss in properties scrapped, the latter amounting to $104,098 in the past year, compared with $412,762 in the previous year.

During the year, the company repaid a bank loan of $2,400,000 and reduced long-term debt by $248,878 while adding $508,368 in plant improvements and increasing working capital by $96,807 and other assets by $40,180.

Current assets amounted to $1,732,322 and current liabilities were $713,326 on April 30, a ratio of 2.4 to 1. Book value of the common stock rose from $3.41 to $3.82 per share during the year.

At the annual meeting, stockholders voted to increase the authorized common stock from 1 million to 2 million shares, the additional stock not to be issued at this time but to be held in reserve for possible expansion needs in the future. At present there are 790,000 shares of common stock outstanding.

Quality Program

In his report to stockholders, Mr. Donnelly said: "During the growing season of 1959, we instituted a program to upgrade the quality of alfalfa being produced. This meant primarily operating on a shorter cutting cycle in harvesting alfalfa. This enabled us to produce a larger percentage of high grade material than in any previous year. This generous supply of high grade material permitted our sales organization to sell larger tonnages of our 18% Hi-N grade, which commands a premium of $3 ton and also 20% broiler layer grade, which is subject to a premium of $10 per ton above the regular 17% grade."

Due to the closing of five marginal plants, total tonnage and total sales declined from $9,733,373 to $9,113,648 in the past year, but the elimination of these plants "improved our quality and was a contributing factor towards turning the company to the profitable side of the ledger," Mr. Donnelly said.

• • •

National Alfalfa Board Adds A. R. McFadden

KANSAS CITY—A. R. McFadden was elected a director of the National Alfalfa Dehydrating & Milling Co. at its recent annual meeting of stockholders in Kansas City.

A. R. McFadden

Mr. McFadden is vice president and general sales manager of the company.

Other directors are: John R. Porter, president, Porter Oil & Gas Co., Oklahoma City, who is chairman; John F. Connelly, president of Crown Cork & Seal Co., Inc., Philadelphia; Robert W. Drummond, Francis I. duPont & Co., Philadelphia; Edgar M. Tutwiler, president of the Appalachian Tire Products Co., Mt. Hope, W. Va.; Gus Wolfe, certified public accountant, Neodesha, Kansas, and W. A. Donnelly, president of National Alfalfa.

Enzyme Fortified Feed

DES MOINES, IOWA — The Farm Bureau Service Co. of Iowa recently announced that enzymes are now available in Farm Service feeds for steers.

The Iowa company is one of the first in the state and country to add enzymes to steer feed. It was only recently that the Food and Drug Administration approved the use of enzymes in steer feeds.

The announcement was made at a series of sales clinics for personnel of the local Farm Bureau service companies throughout the state.

Names Distributor

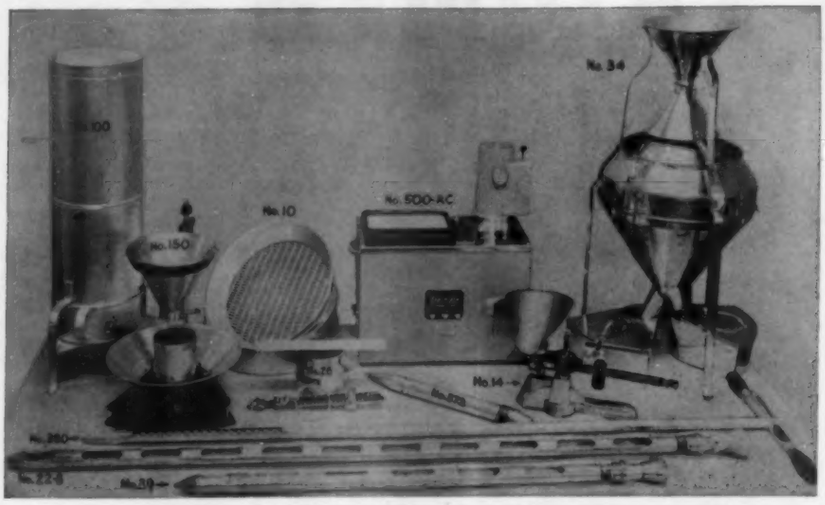
GRAND LEDGE, MICH. — Announcement of the appointment of Haynes Milling Co., Inc., Portland, Ind., as distributor for some Parsons products has come from Parsons Chemical Works, manufacturing chemists.

Haynes Milling Co., Inc., supplies the elevator trade of northern Indiana and northwestern Ohio. They will be handling Parsons' complete line of quality seed treatments, fumigants and cattle sprays.

SAVE UP TO $41.10 with these SEEDBURO combination sets

Any one of these Seedburo combination sets will offer you the ultimate in accurate, fast, convenient testing equipment

Prompt shipment— in time for your busy season!



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Combination No. 1	
Steinlite No. 500-RC Moisture Tester	$495.00
No. 34 Heavy Duty Boerner Sampler	110.00
	$605.00
Special Comb. Price	568.70
SAVE →	$36.30

Combination No. 2	
Steinlite No. 500-RC Moisture Tester	$495.00
No. 100 Modified Sampler	68.50
	$563.50
Special Comb. Price	529.70
SAVE →	$33.80

Combination No. 3	
Steinlite No. 500-RC Moisture Tester	$495.00
Seedburo Dual Range Temperature Probe	137.50
	$632.50
Special Comb. Price	594.55
SAVE →	$37.95

Combination No. 4	
Steinlite No. 500-RC Moisture Tester	$495.00
No. 51 Wt. Per. Bu. Boerner Tester	190.00
	$685.00
Special Comb. Price	643.90
SAVE →	$41.10

Combination No. 5	
No. 34 Heavy-Duty Boerner Sampler	$110.00
No. 150 Filling Hopper	35.00
	$145.00
Special Comb. Price	129.50
SAVE →	$15.50

Combination No. 6	
No. 34 Heavy-Duty Boerner Sampler	$110.00
No. 39-A Probe	35.50
	$145.50
Special Comb. Price	129.95
SAVE →	$15.55

Combination No. 7	
No. 100 Modified Sampler	$ 68.50
No. 39-A Probe	35.50
	$104.00
Special Comb. Price	93.60
SAVE →	$10.40

Combination No. 8	
No. 100 Modified Sampler	$ 68.50
No. 17 Soybean Sieves	11.70
	$ 80.20
Special Comb. Price	72.20
SAVE →	$8.00

IT WILL PAY YOU TO ORDER *NOW!*

NO COMBINATION ORDER WILL BE ACCEPTED AFTER AUGUST 15, 1960

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CHICAGO 6, ILL.

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☐ No. 3 $594.55 ☐ No. 7 $93.60
☐ No. 4 $643.90 ☐ No. 8 $72.20

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What about that rumor?

For details, call

Ralph Grier — FE 8-8511

See page 41

Stable Vitamin K Now Available

An extremely stable vitamin K premix, NEW PROCESS HETROGEN K, was made available to the feed industry today by the Heterochemical Corporation of Valley Stream, L. I. Years of research and development went into the perfection of this new product which assures maximum stability of vitamin K premixes under the most adverse conditions of temperature and humidity. Under normal storage conditions NEW PROCESS HETROGEN K PREMIX† retained 98% potency while ordinary vitamin K premixes lost 30% of their labeled potency.

In accelerated storage tests where old style premixes of poor stability lost from 50% to 73% of their potency, NEW PROCESS HETROGEN K retained 92% potency. Feed manufacturers can now be assured that the potency in the bag matches the potency on the tag, whatever the storage circumstances.

Prices of NEW PROCESS HETROGEN K are competitive with ordinary vitamin K premixes now on the market. For many mill owners this can mean a reduction in vitamin K fortification costs by elimination of overfill and storage losses. A full range of potencies from 4 to 64 grams per pound are available on calcite or edible soymeal carriers.

the POCKMAN

2 IN 10 METHOD FOR CAGE LAYERS

LOWER INVESTMENT

LOWER PRODUCTION COST

Meet lower egg prices and still make a profit. THE POCKMAN CAGE PROGRAM is the answer. Put two birds in a ten-inch cage—THE POCKMAN 2 IN 10 METHOD—lower your overhead—increase the number of birds in your house—reduce your building cost per bird.

Production costs are kept to a minimum through THE POCKMAN 2 IN 10 program in superior POCKMAN cages—the only cage with heavy galvanizing for longer life.

NO FEED WASTAGE—properly designed feed trough. RECIPRO-MATIC FEEDER readily adaptable.

LONGER MORTALITY—POCKMAN engineered cage design eliminates pick-outs and cannibalism with built-in protection of properly designed cage partitions.

LESS CRACKED EGGS—exclusive inner spring of POCKMAN cage floor with four-point suspension assures greater profit with less cracked eggs than any other cage.

BETTER FEED CONVERSION—properly designed and engineered cages assure uniform feed and water consumption.

POCKMAN keeps your investment low by offering the best design for placing two birds in a ten-inch cage. Join the POCKMAN 2 IN 10 program and reduce your production costs.

L. A. POCKMAN MANUFACTURING CO.
DIVISION OF MONTGOMERY AND CRAWFORD COMPANY, INC.
DECATUR — ALABAMA

Write or 'phone EL 3-1521 today for further information and price list.

EQUIP YOUR HOUSE with POCKMAN cages for approximately **85c** per bird including POCKMAN'S labor saving RECIPRO-MATIC FEEDER

A GIFT FOR THE TEACHER—Sir John Hammond, center, Cambridge, England, receives a gift from two of his students, W. C. Behrens, left, extension livestock specialist, University of Nevada, and Wesley Combs, University of Wyoming, at the close of the summer school session at Washington State University. Sir John, a top animal scientist in the British Empire, taught two courses at Washington State—a two-credit course in physiology of reproduction and a one-credit seminar. Forty student enrollees came from nine states and three Canadian provinces.

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Not since the redman actually used shells for wampum have poultrymen been offered a better bargain. Even though wampum is considerably devaluated, it still costs only a nickel a year per bird to guarantee the finest egg shells a hen can build.

Pure, soft, clean and dust-free, EGGSHELL BRAND Oyster Shell is tops in the field of digestibility. Push 'em. More dealers do.

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BALTIMORE, MARYLAND

'Better Beef' Plan Starts in St. Joseph

ST. JOSEPH, MO.—A "Better Beef" program, sponsored by the St. Joseph Chamber of Commerce and the St. Joseph Livestock Market Foundation has been launched. Among the points stressed in the program is one of definite feeding programs.

Proposals on feeding include: Producing fall or winter calves (September to February), creep feeding calves while nursing and dry lot feeding calves during weaning, and producing spring calves (December to April), starting feeding before seven months of age or Sept. 15 and full feeding calves until finished.

This volunteer program, formulated during the last five years, is being offered as a challenge to government-subsidized agriculture, according to the St. Joseph groups.

The program proposes: Retention in the Midland Empire area of beef cattle from birth to market, increasing the supply and reputation of choice slaughter beef cattle on the St. Joseph market and adding gross income of $10 million annually to Midland Empire farmers.

Working with the program will be Missouri, Kansas State and Nebraska universities.

Program Outlined

Outlining the program were E. Y. Lingle, meat packer; Larry Ehlert, feed dealer, and Sid Johnson, farmer. They said specific points, in addition to the definite feeding program, include:

1. Production of better quality calves by use of registered bulls and select replacement of heifers on type, quality, weight and age at weaning.

2. Grouping of calves in a two-month calving period.

3. Feeding of calves to choice slaughter grade—weighing 700 to 1,050 lb.

4. Feeding cow herds a balanced ration making maximum use of grass and roughage to make better calves.

5. Castrating, dehorning and vaccinating calves.

6. Maintaining of adequate disease and parasite control.

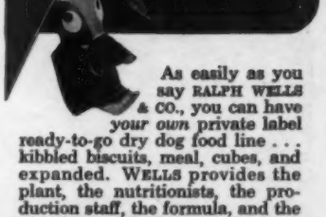
Explaining the program was Jack Killackey, chairman of the chamber's livestock committee. He noted many beef calves now produced in this area are sold to cattle finishers in other midwestern states, where they eventually are slaughtered on those markets. He said the immediate objective of the chamber is to raise $25,000 over a five-year period to publicize the program and assist county agricultural agents in promotion and implementation of the program.

Increased Income

Don Spalding of the chamber's agricultural division, said the program would increase farm income by $100 per cow.

He noted many thousands of bushels of grain are stored in government warehouses. "This program will help put much of this grain into a high quality product," he asserted.

Your own dog food plant with no overhead



As easily as you say RALPH WELLS & CO., you can have *your own* private label ready-to-go dry dog food line . . . kibbled biscuits, meal, cubes, and expanded. WELLS provides the plant, the nutritionists, the production staff, the formula, and the complete product . . . packed under your label, shipped in full carload lots, or in mixed carloads with ingredients. You never tie-up a dollar in new equipment, additional overhead or payroll. WELLS is truly *your* subsidiary because WELLS does *not* market a dog food line of its own. Contact RALPH WELLS & CO. today . . . the one best source for *your* private label dry dog food line.

Write for data sheets on complete dog foods

RALPH WELLS & CO.
MONMOUTH, ILLINOIS
SOURCE OF THE BEST—FOR MAN'S BEST FRIEND

Cargill Sells Fish Oil Business to Haynie

BALTIMORE, MD. — Sale of the fish oil business of Cargill, Inc.—involving fish oil products Falkovar, Falkidine and Falkomast—to Haynie Products, Inc., was announced recently by the two firms.

James R. Cargill, manager of the technical oils and resins department of the Cargill firm, and Allen W. Haynie, president of the Haynie Co., said the sale will include all trade names, processes, refining techniques, customer information and rights of production of various products using fish oil to provide vehicles for paints, enamels, varnishes and similar products.

It was pointed out that Haynie, a long-time manufacturer of fish oil products, operates its own fishing fleets and is equipped at its Baltimore plant with facilities for refining and producing all grades of fish oil. Mr. Haynie said, "We are pleased to include among our many products these widely used and well accepted names. We assure Cargill's former customers that our services and standards of quality will be in no way less than they have known in the past."

The Haynie organization markets anti-oxidant processed fish meal—wholemeal and solubles—under the Hi-Seas trademark. The latter products are produced at Haynie plants located in New Jersey, Virginia and Mississippi.

Red Rose Feeds Names Export Head

LANCASTER, PA. — Naming of George Nieto as export manager for John W. Eshelman & Sons, manufacturers of Red Rose Feeds, has been announced.

Mr. Nieto was born in Quito, Ecuador, and graduated from St. Gabriel College there in 1948 with a degree in business administration. After two years as consular correspondent for the Foreign Affairs Ministry in Quito, he moved to Philadelphia and became a part-time instructor of Spanish at the Pan-American School of Languages and at The Berlitz School in Newark, N.J., from 1951 until 1955. During that time he also was employed in several businesses, including publishing and insurance.

Since 1955, Mr. Nieto has been on the staff of the Universal Dental Co. of Philadelphia and has attended the University of Pennsylvania to complete courses in export and foreign trade and in advanced business systems.

Publishing Newsletter

NEW YORK—Publication of a new bi-monthly newsletter to the feed trade called "Borden's Bulletin" has been announced by the Borden Co.'s feed supplements division.

Richard G. Sanders, the division's marketing director, said that the aim of the newsletter is to describe key elements of Borden's research work, industry research, general Borden news and product reports. It has a mailing list of some 5,000 names.

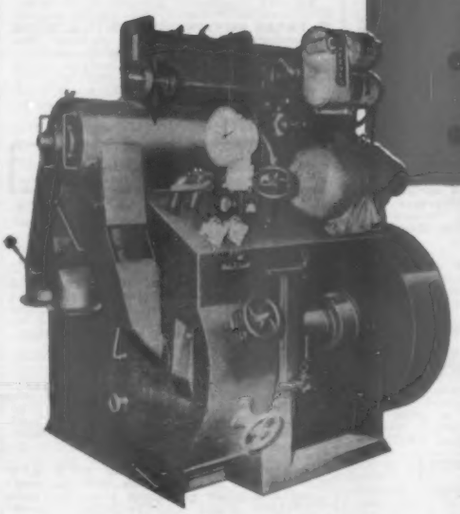
Hoffman
for vitamins
Hoffman-Taff Inc.
SPRINGFIELD, MISSOURI

FEEDSTUFFS—*LEADER in its field*
More advertisers use FEEDSTUFFS than any other publication in the feed industry

Wenger Multi-Duty PELLET MILLS

One Unit Producing All 3 Major Types of Feed

- HARD PELLETS WITH OR WITHOUT LIQUIDS
- WENGERBLENDED MASH FEEDS ONE OR TWO LIQUIDS
- HI-MOLASSES PELLETS OPTIONAL (30% to 50% Molasses)



Owners believe that the Multi-Duty is unequaled in its rugged construction, its top hard pelleting capacities, and its versatility. No other pelleting equipment has brought such great opportunities for meeting all the needs of feed manufacturers—at a cost within the reach of most. The Multi-Duty is more than a producer of feeds—it's a creator of opportunities.

Phil Wake, J. H. Wake Feed Mill, Oskaloosa, Iowa, has a fine new feed mill built around a Multi-Duty. Mr. Wake comments:

"We have used The Multi-Duty Pellet Mill for over a year for the production of complete swine and poultry rations, plus the manufacture of a high molasses pellet, which we were unable to make previous to this installation.

"The simplicity and ease of operation has been remarkable. The capacity also is greater than anticipated while maintenance is a very minimum".

Gordon McKinney, General Manager, Honeggers & Co., Inc., Lincoln, Nebraska has this to say about their Multi-Duty:

"Honeggers' operate Wenger Multi-Duty Pellet Mills in plants at Lincoln, Fairbury, and Indianola. In our Lincoln plant, the 125 HP Multi-Duty equipped with three liquid conditioning feeders (molasses, fish solubles and fats) produces top quality range cubes, hard pellets and crumbles, as well as high molasses pellets with molasses content as high as 40%. We are also able to produce fine quality feeds in meal form with high liquid feed content".

Mr. Louis Ebel of the Ebel Alfalfa Company in Scribner, Nebraska, is one of the leading alfalfa processors in the Midwest. About his Multi-Duty, Mr. Ebel has this to say:

"We are most pleased with the performance of our Multi-Duty Pellet Mill and Horizontal Pellet Cooler which are producing fine quality dehydrated alfalfa meal pellets at good capacity rates. We have also developed a nice off-season business on suncured alfalfa pellets with molasses."

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SABETHA, KANSAS · PHONE AVenue 4-2133
Standard of the Industry for Liquid Feed Mixing, Pelleting and Cooling Equipment.

Another Profit-Able "FARMACEUTICAL" from Specifide

BOOST SILAGE VALUES UP to 25% with SILO-ZYME

SILAGE CULTURE CONCENTRATE

- New Low Price . . . Treat 1-Ton for 95c
- Makes Silage Go Up to 25% Farther
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A real profit-maker for dealer and customer. Exclusive bacterial action helps convert and release natural growth stimulators and nutrients in silage, boosts nutrient values and efficiency up to 25%. Farm Proven 5 Years!

Order from our Salesman, or Write . . .

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☆ Classified Ads ☆

Classified advertisements received by Tuesday each week will be inserted for the issue of the following Saturday. Rates: 20¢ per word; minimum charge $3.00. Situations wanted, 15¢ a word; $2.25 minimum. In figuring cost of your classified ad . . . each word, abbreviation, telephone exchange and number, set of initials, or group of figures counts as a word. To the number of words in your want ad itself add six (6) words for your name and address or name and address of your firm. This applies for both direct-reply ads and for blind ads containing a box number. If an ad is keyed, care of Feedstuffs, 25¢ per insertion additional charged for forwarding replies. Commercial advertising not accepted in classified advertising department. Display advertising accepted for insertion at minimum rate of $13.00 per column inch. No discount on ads ordered for more than one insertion.

All Want Ads cash with order.

MACHINERY WANTED

ALL KINDS OF GOOD USED GRAIN processing machinery. E. H. Beer & Co., Inc., Baltimore 24, Md.

WANTED — GOOD USED BULK TRUCK, either combination or hopper type. Ed Ferguson, Delta, Iowa.

WANTED — GOOD USED 5 H.P. TRUCK hoist for 12 ft. driveway. Goode Milling Co., Mangum, Okla.

WANTED TO BUY — RICHARDSON scales, bag closing machines and other good mill, feed and elevator equipment. J. E. Hagan Mill Machinery, Jefferson City, Mo.

DRIER WANTED — CAPACITY 2-3 TONS per hour. 15% moisture to be dried down to 3% moisture. Address Ad No. 6119, Feedstuffs, Room 1101, 52 Vanderbilt Ave., New York 17, N. Y.

HELP WANTED

SALESMAN WANTED — OPPORTUNITY for real producer with ambition to become sales manager of moderate size feed, grain, seed and farm supply business located in The Land of Pleasant Living. Address Ad No. 6143, Feedstuffs, Minneapolis 40, Minn.

TURKEY FEED SALES SERVICE

We are expanding our turkey feed sales territories and need several experienced men for sales and service work. Excellent opportunity for men who are willing to specialize in turkey work and who can assume full responsibility for flock supervision. Guaranteed salary draw with provisions for annual bonus. If you are interested in a great future with the fastest growing feed company in the Upper Midwest, write for information today.

Supersweet Feeds Division
International Milling Company
1200 Investors Building
Minneapolis 2, Minnesota
Attention: T. H. Hanson

FEED INGREDIENT SALESMAN

Experienced salesman to represent major feed ingredient supplier in Middle Atlantic and Northeastern States. Age 30-35. Extensive travel. Established, aggressive company. Address ad No. 6168, Feedstuffs, Minneapolis 40, Minn.

NUTRITIONIST

At least an M.S. in animal nutrition with several years' industry experience. Man in mid-thirties with the desire and ability to grow in other phases of the feed business, as well as nutrition, preferred. We are a medium-sized, mid-western mill selling a long established quality brand. Send complete resume to ad No. 6173, Feedstuffs, Minneapolis 40, Minn.

HELP WANTED

ASSISTANT SALES MANAGER WITH OPportunity to become sales manager with food manufacturer located in central states. Address Ad No. 6117, Feedstuffs, Minneapolis 40, Minn.

NUTRITIONIST — MIDWESTERN FEED manufacturer. At least M.S. in animal nutrition. Give complete details of education and experience. Address Ad No. 6136, Feedstuffs, Minneapolis 40, Minn.

MACHINERY FOR SALE

FEED MIXER, 1-TON CAPACITY, GUARanteed first-class throughout, 5 H.P. motor drive. Address Ad No. 3479, Feedstuffs, Minneapolis 40, Minn.

FOR SALE—SPROUT WALDRON 24 IN. attrition mill. 2 20 h.p., 220 volt motors. Ravarino & Freschi, Inc., 4651-53 Shaw Boulevard, St. Louis 10, Mo.

WHIRLAWAY AIRBLAST CAR LOADERS, cast iron pulleys, new and used feed and elevator equipment. Hagan Mill Machinery, P.O. Box 574, Jefferson City, Mo.

FOR SALE—20' IOWA MILL, MOUNTED on 1957 2-ton truck powered by GMC diesel, 2-ton horizontal mixer and molasses blending equipment. Moores Manufacturing Co., Windom, Minn.

ONE 36-IN. ATTRITION MILL; 5-TON EUreka horizontal mixer with silent chain drive and 40 H.P. motor. J. E. Hagan Mill Machinery, P.O. Box 574, Jefferson City, Mo.

TWO CHAMPION MOBILE MILLS — ONE 1956 with horizontal mixer mounted on 1956 Ford. One 1958 model with vertical mixer mounted on GMC truck. Excellent condition. Will sell cheap. Contact Blue Chip Milling Co., Brookfield, Mo.

FOR SALE—ENCLOSED MOTORS; RICHardson scale; truck scales; hammermills; oat crimpers; horizontal and upright feed mixers; sewing machines; elevator legs; screw conveyors; molasses mixers and pellet mills. J. E. Hagan Mill Machinery, Box 574, Jefferson City, Mo.

MOBILE MILL, JUST LIKE NEW. HAS 2-ton mixer and 20-in. hammermill driven by 124 H.P. GMC diesel mounted on 2-ton International cab-over with 2-speed. Will sacrifice for $7,950. Can finance $4,000. Call Frank at Clinton 6-4266, Madison, S. D.

CAMPBELL DRYER, DOUBLE UNIT batch. Excellent condition, 2 years old. Located East Central Illinois. Complete with 15 h.p. motor, gas burner, etc. Immediate delivery. Priced for quick sale. Daycom, Inc., 157 North Bryant Avenue, Minneapolis 3, Minn. FEderal 6-9671.

JACOBSON NO. 6 HAMMERMILL; 20 IN. attrition mill with 2 15 h.p. motors; Gehl 20 in. hammermill; Kelly-Duplex crusher-feeder; Blue Streak 5 AC & 4 AC hammermills; 60 & 75 h.p. motors and compensating starters; Triumph No. 100 sheller. Harold A. Peterson, Inc., Watertown, Wis.

FOR SALE — ONE SPROUT-WALDRON, unused, 336 cu. ft. ribbon mixer. Unused No. 9 Sturtevant rotary blender, 150 cu. ft. T304 stainless steel dry material handling system including: 1,800 cu. ft. weigh hoppers, Ajax "Lo-Veyor" shaker conveyors, bucket elevators, screw conveyors, all stainless steel. Send for details. Perry, 1402 N. 6th St., Philadelphia 23, Pa.

FOR SALE
Feed and Grain Handling and Processing Equipment
NEW & USED
Scales, Hammermills, Feed Mixers, Sewing Machines, Elevators, Pellet Mills, and Grain Cleaners
E. H. BEER & CO., INC.
Ibsen Ave. & Newkirk St.
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Buy Only Seedburo
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FEEDSTUFFS

E. E. Kelm Elected President of Cargill

MINNEAPOLIS — Erwin E. Kelm has been elected president of Cargill, Inc., by the company's board of directors to replace Cargill MacMillan. Mr. MacMillan was granted a leave of absence from the nationwide agricultural products firm to recover from an illness incurred earlier this year.

E. E. Kelm

An announcement at Cargill headquarters from John H. MacMillan, Jr., board chairman, said the management change was voted last week during an annual board meeting. He said Mr. Kelm, who has been with Cargill since 1933 and was named executive vice president in charge of over-all operations in 1957, will continue to have operational responsibility in addition to his role as president.

Cargill MacMillan, who has been ill since March, "is gradually recovering, with every expectation of becoming once again active in the company's affairs," the board chairman said. "He will remain on the board of directors and on the executive, finance and audit committees of which he is chairman, but he felt—and the board agreed—that his continued improvement would be more certain if his total responsibility could be lessened without depriving the company of an active president."

Cargill MacMillan is the brother of John MacMillan, a grandson of W. W. Cargill, founder of the firm, and a son of former president John H. MacMillan, Sr. He began work for Cargill in 1923, was elected secretary of the Cargill Elevator Co. in 1926 and became a director in 1929. When that company was reorganized as Cargill, Inc., in 1936 he was elected vice president and secretary. In 1950 he was named executive vice president, and in 1957 its fourth president.

The firm's new president began work for Cargill as a grain merchant specializing in barley purchases and sales and later held general merchandising posts at a number of company locations. He was elected vice president and head of the firm's grain division in 1946, was put in charge of over-all operations in 1954, was elected a director in 1955 and became executive vice president in 1957.

Regional Sales Head Appointed by Dawe's

CHICAGO — Fred F. Heinzig has been named north central regional sales manager for Dawe's Laboratories, Inc. The appointment was announced by D. B. Kinkaid, Dawe's vice president-marketing.

F. F. Heinzig

Mr. Heinzig received his master of science degree from the University of Oklahoma in 1950.

For nine years prior to joining Dawe's, he was with Merck & Co., which he represented to the feed industry.

Heads Feed Club

ST. JOSEPH, MO.—Ray Gould, advertising manager for Dannen Mills, has been elected president of the St. Joseph Feed, Seed, Grain & Fertilizer Club.

Other officers elected at the organization's annual meeting include: Dolcy Holst, vice president; Webb Embrey, secretary, and Joe Joffe, treasurer.

A. B. Williams G. N. Roberts, Jr.

Bemis Bag Names Two to Sales Posts

ST. LOUIS — Two sales appointments have been made by Bemis Bro. Bag Co. here, according to H. V. Howes, vice president and director of sales.

A. B. Williams, manager of sales for the western operations of Bemis in San Mateo, Cal., has been transferred to the St. Louis general sales department and G. N. Roberts, Jr., comptroller for western operations, has been appointed west coast representative for the St. Louis general sales department.

Mr. Williams will assume responsibility for sales management methods, procedures and performance and sales training functions for the entire company. Mr. Roberts will handle sales pricing for Bemis operations west of the Rockies.

Mr. Williams joined the company in 1942 as a sales representative at St. Helens, Ore. Mr. Roberts joined Bemis at the company's Boston offices in 1939.

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Program Set for Iowa Feed Meeting

DES MOINES—A program slanted toward the feed dealer and the feed salesman actually calling on and servicing farmers has been planned for the annual Iowa Feed Conference to be held Sept. 13 at Iowa State University, Ames.

The speakers include specialists from Iowa State University and the feed industry.

Leading off the morning program will be Dr. Stanley Balloun, Iowa State University, talking on "Stability of Nutrients—The Basic Problems," followed by Marvin Rohlf, Golden Sun Milling Co., speaking on "Stability of Nutrients—The Feed Man's Way of Overcoming These Problems."

Prof. Len Eggleston then will talk on "Quality Egg Production and Marketing." Other talks on the morning program will include: "Services Iowa State University Has to Offer the Feed Man," Dr. L. E. Johnson, Iowa State; "The Effect of Nutrition and Management on Reproduction in Swine," Dr. V. C. Speer, Iowa State, and "The Feed Salesman's Responsibilities to His Customers," C. E. McIlvain, Nutrena Mills, Inc.

In the afternoon, Dr. W. Monlux of the host school will talk on "The Interrelationships of Nutrition, Management and Disease in Farm Animals," and Dr. Richard Forsythye, also of Iowa State, will head a panel discussion on "Latest Problems in the Field." On the panel will be Iowa State University and feed industry specialists.

More than 500 feed men are expected to attend the conference, sponsored jointly by the university, Feed Institute, Inc., Midwest Feed Manufacturers Assn. and Western Grain & Feed Assn. of Iowa.

One of the purposes of the conference is to help bring about better understanding and cooperation among Iowa State University research, extension and teaching personnel; county extension directors, vocational agricultural instructors, feed manufacturers, feed dealers and livestock and poultry producers in the feeding, managing, breeding and marketing of livestock and poultry.

Members of the Iowa Feed Conference Committee from the feed industry include Arch Gilchrist, Nutrena Mills, Inc.; Ray Van Poucke, Ames Reliable Products Co.; Robert Zinn, Allied Mills, Inc.; Lloyd Larson, Midwest Feed Manufacturers Assn., and Bob Skinner, Western Grain & Feed Assn. of Iowa.

Mississippians Seek Hay Source for Feed

JACKSON, MISS.—A survey is being conducted to locate sources of hay, since many of the beef cattle men in Hinds County are expressing concern as to how they will be able to winter their cattle.

H. G. Forbes, assistant county agent in charge of livestock work, says that in addition to hay, careful consideration may be given to the use of cottonseed hulls and meal in the wintering program. It will require approximately 15 lb. of hulls and 2 lb. of meal daily ration for an 800 lb. cow and calf, he notes. Assuming one feeds for 100 days, this will require ¾ ton of hulls and 200 lb. of meal. If plans are to use hulls and meal, they should certainly be booked during rush ginning season in order to take advantage of the usual lower seasonal prices, Mr. Forbes says.

Feeding hulls requires considerable storing space and trough space, he notes. Other than these two objections, it is next to the cheapest way to winter cattle. The cheapest way is on hay cut from pastures, which is out of the picture on most farms this year, he says.

"It appears that there will be more calves this year than ever before that will just not be ready to go to market before frost comes," Mr. Forbes notes. "A good plan on these calves will be to begin breaking land now, if the land is available, and seed to winter grazing crop in September."

One other point, he says, that will help economize in the wintering program, will be to cull cow herds of all unbred cows by having a veterinarian pregnancy-test them sometime during the late summer or early fall and at least two months after the breeding season has been completed.

Feed Parley Speaker

PHILADELPHIA — Samuel M. Golden, president of the Amburgo Co. here, will be a guest speaker at the Mutual Millers & Feed Dealers Assn. summer convention to be held Aug. 16 and 17 at Hotel Jamestown, Jamestown, N.Y. Mr. Golden will speak at a luncheon Aug. 17.

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Poultry Cancer Study Yields New Information

WASHINGTON—New insight into the behavior of poultry cancer, provided through recent research by scientists of the U.S. Department of Agriculture, may aid in the battle against other types of animal and human cancer.

Rous sarcoma, a virus-caused poultry cancer previously thought to be non-contagious, has been proved transmissible by direct contact between birds in experiments conducted by Dr. B. R. Burmester of USDA's Agricultural Research Service at the U.S. Regional Poultry Laboratory, East Lansing, Mich.

Virus Information

These studies with poultry establish more firmly the belief held by many scientists that viruses cause some forms of animal and human cancers. And, by showing the contagious nature of one of these viruses, the studies suggest that similar virus-caused cancers may also prove contagious. The work indicates also that the contagiousness of a virus-caused disease may depend largely upon the virulence of the virus and susceptibility of the host.

In the experiments at East Lansing, the virus of Rous sarcoma was transmitted to healthy chickens when they were raised in direct contact with birds inoculated with the virus. Tumors that developed in the birds infected by contact were microscopically and pathologically the same as tumors in inoculated birds.

Virus taken from the tumors of contact-infected birds was found by immunological tests to be the same as the virus used by the scientists to inoculate the chickens. In addition, the concentration of virus in tumors from contact-infected birds was directly proportional to the amount of virus used to inoculate the chickens to which the contact-infected birds were exposed.

All chickens in the tests were housed in special solid-walled cubicles, on wire-mesh floors raised a foot above the concrete floor of the pen. Birds were inoculated either subcutaneously or intravenously with varying amounts of the Rous sarcoma virus.

In one test, 35 of 45 healthy birds raised in direct contact with birds inoculated subcutaneously died of Rous sarcoma. Of 59 chickens reared in direct contact with 118 birds inoculated intravenously with a lower dose of the virus, six developed tumors and died.

No untreated birds placed in indirect contact with inoculated birds died with tumors. The untreated chickens were put in the same cubicles with inoculated penmates, but were separated from them by a wire-mesh screen.

Studies of the possible modes of transmission of the Rous sarcoma or Rous-like viruses have been limited. However, the experiments show that the virus can enter a bird's body through a feather follicle and cause local as well as visceral tumors.

Tumors occurred in 80% of the chickens when the virus was applied to skin that had been scratched with a hypodermic needle or to an area where immature feathers had been extracted. Intranasal instillation of the virus caused tumors in more than half the birds.

However, no tumors resulted when virus was placed under the tongues of chickens or applied to a nonfeathered area of intact skin or when chickens were confined to a small enclosure and made to breathe a high virus dose in aerosol form for five minutes every day for five days.

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FEEDSTUFFS

EGG PRICE

(Continued from page 4)

a result of the influence of New York, on the price structure. Offerings were barely adequate, especially large. Some movement of midwestern eggs into this area was noted and inventories were relatively low. Reports indicate the movement through retail outlets was irregular but generally disappointing. Most of the interest centered on large.

The frozen and dried egg markets were very slow. Interest was light and offerings heavy. Price changes were minor.

Ready-to-cook broiler and fryer buying interest was generally no more than fair in all terminal markets for the week. Where an attempt to feature fryers was encountered, difficulty was reported in acquiring offerings at desirable prices for favorable retail promotion. Offerings of ready-to-cook from country points were ample with reports of sales forced in instances or excess being wrapped for freezing in an effort to assist clearing in some quarters. Prices for the week were generally fractionally higher to 1¢ lower.

Hens-Live Supply

Hens-live supplies were light to moderate early in the week, but as the week progressed, continued warm to hot weather increased the incidence of non-layers which in turn increased the volume of hens moving off the farms. Only Georgia reported offerings of both heavy and light type hens short of needs. Prices in major terminal markets were mostly unchanged.

Demand for heavy tom turkeys showed little improvement during the week as restaurant and hotel suppliers purchased only immediate requirements, disinclined to be speculative at current asking prices and, with the nearness of the new crop, prices at terminal markets declined from ½@1¢. Trading in hens was moderate. Some large chain buying was noted, primarily for future delivery. Terminal dealers were concerned over the high asking prices at country points for hens. Supplies of fryer-roasters of desirable weights were comparatively light, however increased asking prices have tended to curb large chain buying for summer sales at attractive retail prices which would enhance heavy volume movement.

Slow Broiler Output Trend Continues

SALISBURY, MD.—Fifteen of the 22 important broiler producing states cut their egg set last week, thus continuing the trend to slow down broiler production.

The total egg set last week was 44,454,000. This was down 2% from the previous week, however the set was still 2% above the corresponding week a year ago. States showing sizeable decreases were Maryland, Alabama, Georgia, North Carolina and California.

Broiler chick placements in the 22 states totaled 33,491,000. This was 4% below the previous week but 5% above the corresponding week a year ago. Decreases were reported for 15 states compared with the previous week. States showing appreciable decreases included Alabama, Mississippi, West Virginia, Arkansas, and North Carolina.

Prices in Delmarva averaged 18.03¢ lb. on the farm, compared to 18.26¢ the week before. A year ago the price was 16.75¢.

ELEVATOR DESTROYED

ST. LAWRENCE, S.D.—Fire of undetermined origin destroyed the Farmers Union grain elevator here, a truck and 25,000 bushels of grain, according to Fire Chief Harry Corrin.

CONTROLS

(Continued from page 1)

industry currently operates with many products and compounds and samples these products as to nutritional values, "and there is no reason to believe that it cannot extend such inspection to sample residues of economic poisons which are being used in the production of those components."

This information comes following an announcement this week that the Federal Trade Commission is now moving in this same direction.

FDA officials say the FTC announcement is new to the feed industry and also the food industry, but it does not represent any major change in policy which has previously been in effect in the drug field, as regards advertising of products.

This FTC announcement clearly shows that FDA will supply technical information to FTC when it brings complaints against a feed manufacturer or one company using products in the field of veterinary medicines.

JOINS BANK

(Continued from page 1)

Miller Publishing Co. in Minneapolis and went to Kansas City in 1936 as assistant southwestern manager. In 1945 he resigned as acting manager to become vice president of Staley Milling Co. which was acquired in 1958 by Spencer Kellogg.

In 1959 Mr. Johnson served as president of the Midwest Feed Manufacturers Assn. and has been active in other feed industry organizations. He served as chairman of the first Feed Technology School Advisory Committee and had a major part in generating the industry support which led to the establishment of the feed tech courses and the pilot feed mill at Kansas State University. He also has been active in civic enterprises in Kansas City and served as agricultural vice president of the Kansas City Chamber of Commerce.

PROMOTION

(Continued from page 1)

financing and mill management. Mr. Cooper is a graduate of Purdue University, majoring in animal husbandry.

Succeeding Mr. Cooper as general manager of the St. Louis division for Professional Feeds is Frank W. Miller, who has been sales director in Kansas City. Mr. Miller joined the company in 1947, serving first as salesman in the western Iowa area before moving into sales management. He is a graduate of the University of Missouri.

Grain Commission Firm

MINNEAPOLIS — A new grain commission firm, the E. J. Morris Grain Co., has been opened in Minneapolis. Owner of the new company is Eldon J. Morris, who has been with the Hallet & Carey Grain Commission Co. for the past 11 years.

The new company is located in the Grain Exchange Building, and will act as a grain commission merchant for country customers.

BUY TRUCK LINE

TIFTON, GA. — Aaron Starling, manager of Flanders Feed Mill here, and W. E. Corbitt have purchased the truck line formerly owned and operated by Lewis Flanders, who died recently. Mr. Flanders was also owner of Flanders Feed Mill. Mr. Starling and Mr. Corbitt, nephews of the former feed mill owner, are jointly managing the trucking business. The name of the truck line has been changed to Corbitt and Starling Truck Lines.

Frost, Heat and Drouth in Western States Continue to Damage Crops, Rangeland

Hot, dry weather in Wyoming and Montana and a combination of frost and drouth in Idaho have continued to damage grain crops and rangeland, according to agriculture departments in those states.

In Montana, the weather has forced maturity in dryland crops reducing yield prospects, according to a Montana Crop and Livestock Reporting Service report. Topsoil moisture is gone and subsoil reserves are depleted except for some northeast counties and a few scattered locations elsewhere, the report states.

A shortage of feed supplies was reported in Granite, Powell, Beaverhead, Madison, Chouteau, Stillwater, Yellowstone, Big Horn, Treasure, Rosebud and Dawson counties. Stock water supplies were reported short in the Billings-Forsyth area, but mostly adequate elsewhere.

A Montana feed dealer reports that basically, there was no rain at all in July, except for a few intermittent showers. Normally there is rain in June and July in that state for the grain. The moisture condition going into that time was satisfactory.

"There have been showers the last three or four days, but too late for the crops," he noted Aug. 5.

The dealer pointed out that the winter wheat is coming along nicely with yields and test weights good and laboratory tests indicating the baking quality acceptable.

The spring grain, which includes wheat and barley, lost a lot of yield, he said. Barley has been affected most of all, the dealer reports. The U.S. Department of Agriculture had predicted a record planting of barley and a record production of 52 million bu. The feed man estimates that the barley production figures will be cut at least 25% and maybe a little more.

The alfalfa yield is not up to normal and the native hay and grass for grazing on range is not up to normal either, strictly because of no rain during the growing season, he notes.

No Feed Grain Shortage

"Actually, there has been no shortage of feed grains at all," he says. "Livestock numbers (cattle) have been at an all time high and good business dictates a cut.

"It's a little too early to say whether we anticipate a good feed year. We anticipate an average feed year and if people are not pinched too much on credit for buying, we could have a much better than average feed year. Thirty days from now, one can get a better indication."

Reports indicate that frost and drouth have taken a heavy toll of Bear Lake County crops in Idaho and the loss of feed may be felt by cattlemen during the long feeding period typical of the area.

Many farmers are cutting their wheat for hay, said Hyrum Johnson, county agricultural agent. Winter wheat damage is estimated at 75%. About 9,000 acres were seeded in the area last fall.

Alfalfa hay was badly frozen when the thermometer registered 24° on June 21, and yields of about 25% are expected. It is expected that practically all dryland hay will not produce a second crop.

About 70% of the alfalfa was damaged, or approximately 20,000 acres.

Expected loss in spring wheat and barley runs 25%, but prolonged dry weather may result in heavier damage. Lack of moisture is affecting recovery "quite badly," said Mr. Johnson.

Damage to meadow hay and wild hay is estimated at 15-25%, but it may be as high at 50%, he said. Acreage of winter wheat is about 12,000; barley, 15,000, and wild and meadow hay, about 30,000 acres.

An Idaho feed man says that the long dry spell of about 1½ months was particularly severe in the east and southeast. A lot of dryland barley was hit hard by the frost, he notes, but he also pointed out that there were good soaking rains over the state during the July 29-31 period.

"I was talking to some producers in Caribou County and they say you can't write off the crop yet—this is the usual crop scare," the feed man said. "We do have some reduction, of course. The boys do admit that it's going to be good quality and going to be down from last year. A lot is going to be fed by the producer or sold by the producer to the feeder."

On the barley crop, the principal feed grain crop in Idaho, according to the state as of July 1, production looks like it will be 15% below last year and 7% less than the 10-year average, he said.

"It's not as severe as you would think from reading the headlines," he added. The state indicated a yield of 29 bu. per acre, but the feed man believes it will be a bushel or two above that.

The big danger, he believes, is an early frost. "In some areas, because of slow growing and lack of moisture, the crop has been put in more danger concerning an early frost," he said.

"It's a little too early to tell about the effect on the feed business," he said. "We're going to have an adequate crop in. If production holds the price up, we will have to go to milo as last year. Last year, milo was used quite competitively with barley. Production may stay pretty much in the hands of the producer with the feed trade going to milo."

The state-federal agriculture departments said recently that Wyoming's 1960 fall feed prospects are poor as hot dry weather has left rangeland brown and seriously curtailed hay prospects.

The 1960 hay crop is expected to be considerably below average as cold weather in western Wyoming and drouth in other sections have reduced both the alfalfa and wild hay crops.

Particularly short is the hay crop in the northeastern and central sections of the state. In some of these counties, only one cutting of alfalfa and a light crop of wild hay will be harvested.

The two agencies said the outlook for corn and other forage crops on non-irrigated land is poor.

A shortage of irrigation water has hit some areas of the state, particularly along the Greybull River project in Big Horn County and the Eden-Farson area.

One bright spot in Wyoming's farm picture is an above-normal winter wheat crop.

Morton Markets New Trace Mineral Salt

CHICAGO — Morton Salt Co. has recently formulated and is now marketing a multi-purpose trace mineralized mixing salt, according to announcement by the company. The new product provides salt, manganese, iron, copper cobalt, iodine and zinc for use in mixing in beef, dairy, sheep and mature swine feeds.

With the new product, these elements are available in a form that is insoluble in water and less likely to be leached from salt or feed mixtures when exposed to moisture in the air or pelletizing process. All of these compounds are compatible with other feed ingredients and are of a superior nutritional availability, the company reports.

Because trace-minerals in salt can segregate or separate out due to handling, a new anti-segregation treatment is blended in the product. The company reports that no matter how it is handled before use, the trace-minerals remain evenly distributed in the salt.

The FEED MARKET

PRICE QUOTATIONS, MARKET TRENDS
OF PRINCIPAL INGREDIENTS

NOTE: Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bulk, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

A AND D FEEDING OIL

Chicago: Demand fair; trend steady; supply ample;; straight A feeding oil, with 10,000 units vitamin A per gram, 7@7¼¢ a million units of vitamin A, l.c.l., packed in 55 gal. druma, f.o.b. Chicago, druma included.

Minneapolis: Demand fair; supply ample; 10,000 A 21¢ lb.; 200 D, 3,250 A 17¾¢ lb.; 300 D, 1,500 A 16¢ lb.; 300 D, 750 A 15¾¢ lb.

Denver: Demand stronger; trend steady; supply ample; 21¢.

Boston: Demand fair; supply ample; 400 D, 3,000 A, 21¾¢ lb.; 300 D, 3,000 A, 21¢; 300 D, 3,250 A, 19½¢.

Denver: Demand and trend steady; supply ample; 21¢.

New York: Demand fair; supply adequate; trend steady; 1,500 A, 300 D 16¢ l.c.l.; 2,250 A, 300 D 17½¢ lb.

Chicago: Demand fair; trend steady; supply ample; straight A feeding oil, with 10,000 units vitamin A per gram, 7@7¼¢ a million units of vitamin A, l.c.l., packed in 55 gal. druma, f.o.b. Chicago, drums included.

ALFALFA MEAL

Memphis: Demand fair; supply ample; trend higher; dehydrated, 17% protein, guaranteed 100,000 units, vitamin A, $45.20, bulk.

Los Angeles: Demand slow; supply adequate; trend steady; dehydrated meal, 17% protein, 100,000 A, $50@51; dehydrated pellet meal, 17% protein, 100,000 A, $52@54; suncured meal, 15% protein, $45@46; suncured crumbles, 15% protein, $47@48.

Boston: Demand slow; supply steady; dehydrated 17%, $50; suncured pellets, $46.

St. Louis: Demand slow; supply limited; trend steady; suncured 13% fine, sacked $42; dehydrated 17%, 100,000 A, pellets, demand slow, trend steady, supply ample, bulk $43.

New Orleans: Demand fair; supply adequate; trend steady; 17% protein, vitamin A, $49@50 bulk; $54.50@55 sacked.

Kansas City: Demand good; supply ample; trend steady; 17% dehydrated alfalfa, 100,000 A on arrival, pellets, $39@40 bulk, reground pellets, $41 bulk; 18% dehydrated alfalfa, 125,000 A on arrival, pellets, $42@43 bulk, reground pellets, $44 bulk; 20% dehydrated alfalfa, 150,000 A on arrival, $46@50 bulk, reground pellets, $46@51 bulk; suncured alfalfa demand slow, supply scarce, 13% pellets, $36@37 bulk, No. 1 ¼ inch, $38.50 sacked.

Philadelphia: Demand slow; supply fair; 17% dehy., $50.50.

Ft. Worth: Demand fair for dehydrated; slow for suncured; light offerings; sacked: Dehydrated 17%, 100,000 A, $49@50 truck or rail; suncured: 13% ¼ in. grind, No. 1, $46@47 truck, 15% fine ground dry, $48; with 2% fat added, $50 rail or truck.

Denver: Demand fair; trend steady; supply ample; dehydrated meal, $43 sacked; $38 bulk pellets.

Minneapolis: Demand strong; price unchanged; 17% dehydrated, 100,000 A units, reground pellets $43; oiled reground pellets $45.

Cincinnati: Demand fair; trend steady; supply adequate; 17% dehydrated 100,000 vitamin A $47@48.

Buffalo: Demand fair to poor; trend steady; supply adequate; $54 sacked, Boston.

Chicago: Demand good; trend higher; supply fair; dehydrated, 17% protein, 100,000 units vitamin A, $44.

Omaha: Demand fair; trend steady; supply ample; 17% dehydrated, 100,000 A units, bulk pellets, $40; sacked meal, $46, Omaha basis.

ANIMAL FATS (STABILIZED)

New Orleans: Demand fair; trend easy; supply adequate; 6½¢ lb. tank cars and trucks.

Kansas City: Demand good; trend firm; supply available; prime stabilized tallow, 5½¢ lb.

Ogden: Supply good; $5.75 per 100 lb. weight, bulk.

San Francisco: Demand fair; supply ample; bleachable fancy, 6¼¢ lb.; yellow grease, 4¾¢ lb.

Boston: Demand and supply steady; tallow, 5¾¢ lb.; yellow grease, 5½¢.

Ft. Worth: Demand good; supply short; prime tallow, tank cars, 5¼¢; drums 7¢ f.o.b. north Texas packing plants with returnable drums.

Louisville: Demand fair; trend steady; supply good; bleachable white 6¢ lb., white tallow 6¼¢ lb., yellow grease 5¾¢ lb., all in tanks.

St. Paul: Demand good; supply barely ample; price of bleachable fancy up from 5¼¢ to 5⅝¢ lb., f.o.b. producer's plant.

Chicago: Demand improved on bleachable fancy tallow; trend higher on bleachable, unchanged on yellow grease; supply fair; cwt., tank, truck or carlot, bleachable fancy tallow, $5.75; yellow grease, $5.12½.

BARLEY FEED

Boston: Demand and supply steady; $49.50.

Los Angeles: Demand fair; supply tighter; trend firmer; standard rolled, $2.85 cwt. sacked; standard ground, $2.85 cwt. sacked.

Ogden: Supply good; rolled, $38@39 (whole barley, $33@34).

New Orleans: Demand slow; supply adequate; trend unchanged; $50@53 sacked.

San Francisco: Demand fair; supply ample; rolled $58.50; ground $57.50.

Portland, Ore.: Demand good; trend lower; supply plentiful; $43.

Philadelphia: Demand slow; supply fair; $42.

Baltimore: Demand good; trend steady; supply fair; sacks, $46.50.

Chicago: Demand good; trend steady; supply moderate; sacks, $36.

Denver: Demand fair; trend lower; supply ample; $35.10 bulk, $2.25 sack.

Milwaukee: Demand limited; supply ample; trend firm; feed barley 86¢ per bu., bulk; barley feed, $38 per ton, sacked; ground feed barley, $41.50 per ton, 100's.

BENTONITE (SODIUM)

Denver: Demand slow; trend steady; supply ample; $24.50 warehouse.

Cincinnati: Demand steady; supply adequate; f.o.b. Cincinnati, minimum 30 ton carlots: $9 granular $31.50, less than carlots $40; 200 mesh fine $31, less than carlots $40.

Chicago: Demand fair; trend steady; supply ample; f.o.b. Wyoming and South Dakota shipping points: 200 mesh $14 and net $13.75; fine granular (80 to 100 mesh) $14.25 and net $14; granular, 30 mesh $16.50 and net $16.25.

BLOOD FLOUR

Louisville: Demand slow; trend steady; supply good; $75@80, sacked.

BLOOD MEAL

Los Angeles: Demand slow; supply ample; trend steady; $6 unit of ammonia, sacked.

Ogden: Supply good; $80 per ton in 100 lb. bags, f.o.b. Ogden.

San Francisco: Demand and supply fair; $5.40 per unit of ammonia, sacked.

New Orleans: Demand dull; supply ample; trend steady; $75@80 sacked.

Portland, Ore.: Demand fair; supply ample; trend steady; $110 sacked.

BLOOD MEAL

Louisville: Demand slow; trend steady; supply good; $75@80 ton, sacked.

Chicago: Demand quiet; trend unchanged; supply fair; sacks, 80% protein, $120.

Omaha: Demand and trend fair; supply plentiful; 80%, $95 sacked, Omaha.

BONE MEAL (STEAMED)

New Orleans: Demand slow; supply light; trend steady; $80@85 sacked.

Portland, Ore.: Demand fair; supply adequate; trend steady; $95@97.50 sacked.

Boston: Demand and supply steady; $100.

San Francisco: Demand good; supply ample; $75 sacked.

Los Angeles: Demand and trend steady; supply adequate; imported, $79.75, 20 ton lots, sacked.

Ft. Worth: Demand fair; supply light; sacked, $100, f.o.b. Ft. Worth local manufacture.

Cincinnati: Demand fair; trend steady; supply ample; $90 sacked, Cincinnati.

Louisville: Demand slow; trend steady; supply normal; $80@85 ton, sacked.

Chicago: Demand quiet; trend firm; supply adequate; $75@80.

Denver: Demand and trend steady; supply ample; $110 ton, Denver.

Buffalo: Demand and supply limited; trend steady; $105 ton.

BREWERS DRIED GRAINS

Boston: Demand active; supply tight; 26%, $46@46.50.

Philadelphia: Demand and supply fair; trend unsettled; $45.

New Orleans: Demand fair; trend easy; supply good; $44@46 sacked.

Los Angeles: Demand slow; supply adequate; trend steady; $49.50.

St. Louis: Demand good; supply tight; trend firm; $36.

San Francisco: Demand fair; supply ample; $54 sacked.

Ft. Worth: Demand slow; supply sufficient; 26% protein, $45 Aug.

BREWERS DRIED GRAINS

Cincinnati: Demand poor; trend steady; supply adequate; $42.

Chicago: Demand better; trend upward; supply fair; 26% protein, $33@34.

Buffalo: Demand fair; trend higher; supply fair to poor; $46, Boston.

Louisville: Demand fair; supply ample; trend steady; $44 ton, sacked.

New York: Demand fair; supply ample; trend steady; $44 bulk, $51 sacked, Boston.

Milwaukee: Demand and supply fair; trend firm; $35 ton bulk; $43@43.50 ton 100's.

BREWERS DRIED YEAST

Cincinnati: Carlots 11¢ lb.; 5 ton lots 11¢ lb.; ton lots 11½¢ lb.; all sacked.

Portland: Demand narrow; trend steady; supply ample; 11@12¢ lb.

San Francisco: Demand fair; supply good; 10¢ lb., sacked.

Boston: Demand and supply steady; 11¢ lb.

Louisville: Demand slow; trend steady; supply normal; 10@10½¢ lb., sacked.

Omaha: 10½¢ lb.

Chicago: Demand fair; trend steady; supply ample; 9¾@10¢ lb., carlots, sacked; 9¾@12¼¢ lb., l.c.l.

Milwaukee: Demand fair; trend steady; supply ample; 10½@12¾¢ lb., ton lots, sacked.

St. Louis: Demand fair; trend firm; supply ample; 9½@10¢ lb., carlots, sacked; 10½¢ lb., ton lots; 11½¢ lb., less than ton lots.

Pittsburgh: Carlots 10¢ lb.; 5 ton lots 11¢ lb.; ton lots 11½¢ lb., all sacked.

New Orleans: Carlots 10¢ lb.; 5 ton lots 11¢ lb.; ton lots 11½¢ lb., all sacked.

New York: Carlots 9½¢ lb.; 10 ton lots 10¢ lb.; 5 ton lots 10½¢ lb.; ton lots 11¢ lb., all sacked, f.o.b. New Jersey.

Buffalo: Demand fair; trend steady; supply ample; $9.15 cwt.

Denver: Demand small; trend steady; supply ample; 9¢ lb.

Los Angeles: Demand slow; trend steady; supply adequate; 10¢ lb. in 5 ton lots, 11¢ lb. in 1 ton lots, 12¢ lb. in less than 1 ton lots, all sacked.

Portland, Ore.: Demand limited; supply ample; trend unchanged; 11@12¢.

BREWERS DRIED YEAST

Denver: Demand small; trend steady; supply ample; 9¢ lb.

Cincinnati: Carlots 11¢ lb.; 5 ton lots 11¢ lb.; ton lots 11½¢ lb.; all sacked.

Louisville: Demand fair; trend firm; supply good; 10@10½¢ lb., sacked.

Buffalo: Demand slow; trend steady; supply ample; $9.35 cwt.

Chicago: Demand improved; trend steady; supply ample; 9½@10¢ lb., carlots, sacked; 9¾@12¼¢ lb., l.c.l.

Milwaukee: Demand somewhat better; trend steady; supply ample; 10½@12¾¢ lb., ton lots, sacked.

St. Louis: Demand more active; trend firm; supply ample; 9½@10¢ lb., carlots, sacked; 10½¢ lb., ton lots; 11½¢ lb., less than ton lots.

Omaha: 10½¢ lb.

BUTTERMILK (CONDENSED)

Los Angeles: Demand limited; supply light; trend steady; 5¾¢ lb., 100 lb. lots in barrels; 4¾¢ lb., 500 lb. lots in barrels.

San Francisco: Demand fair; supply good; $5 drums.

Ogden: Supply ample; $4.40 per 100 lb. drum.

Boston: Demand and supply steady; 4¼¢ lb.

New Orleans: Demand slow; supply ample; trend unchanged; $4.25@4.30 paper drums.

Philadelphia: Demand slow; supply fair; $4.25.

BUTTERMILK (CONDENSED)

Louisville: Demand very slow; trend steady; supply zero; $4.25 cwt. in paper drums.

Chicago: Demand slow; trend firm; supply ample; cwt., in 500 lb. barrels, $3.25@3.50.

CALCIUM CARBONATE

Cincinnati: Demand fair; trend steady; supply adequate; $7@7.50 cwt.

Chicago: Demand fair; trend steady; supply ample; fine grind, plain, 100 lb. bags $9.54; bulk, in hopper cars $7.54; bulk, in boxcars $8.04; granular grind $1 premium.

CALCITE CRYSTALS AND FLOUR
(All prices net, sacked, including freight)

New York: Crystals $16.38, flour $10.28.
Buffalo: Crystals $17.11, flour $11.11.
Toledo: Crystals $18.96, flour $12.96.
Boston: Crystals $17.63, flour $11.63.
Lime Crest, N.J.: Crystals $11.50, flour $5.50.

CALCIUM CARBONATE

Cincinnati: Demand fair; trend steady; supply adequate; $7@7.50 cwt.

Chicago: Demand fair; trend steady; supply ample; fine grind, plain, 100 lb. bags $9.54; bulk, in hopper cars $7.54; bulk, in boxcars $8.04; granular grind $1 premium.

Minneapolis: Fine grind, 50 lb. bags $12.75; 100 lb. bags $13; bulk, boxcar $10.50; bulk, hopper $10; coarse grind $1 premium, delivered Minneapolis.

Los Angeles: Demand slow; supply adequate; trend steady; flour, $10.15, 20 ton cars, sacked; meal, $11.15, 20 ton cars, sacked.

CHARCOAL

San Francisco: Demand steady; supply ample; $141 sacked.

Los Angeles: Demand slow; supply adequate; trend unchanged; hardwood poultry, $156 less than ton lots, sacked; $144.40 ton lots, sacked.

Boston: Demand and supply light; granular No. 6, $110.

Chicago: Demand fair; trend firm; supply fair; 50 lb. multiwalls $110.

COCONUT OIL MEAL

Los Angeles: Demand slow; supply adequate; trend unchanged; copra cake, $73.

San Francisco: Demand good; supply tight; solvent, $59.50; expeller, $70.

Portland, Ore.: Demand slow; supply adequate; trend unchanged; $70.50.

COD LIVER OIL (FORTIFIED)

Boston: Demand fair; supply ample; 600 D, 2,250 A, 20½¢; 300 D, 3,000 A, 23¢; 300 D, 2,250 A, 20¢.

New York: Demand fair; trend steady; supply good; 1,500 A, 300 D 16½¢ lb.; 2,000 A, 300 D 20¢ lb.

CONDENSED FISH SOLUBLES

Los Angeles: Demand slow; supply adequate; trend steady; 3@2½¢ lb.

Boston: Demand slow; supply plentiful; 2¢ lb.

New Orleans: Demand light; trend easy; supply fair; $37.50@40 ton, f.o.b. Gulf.

Denver: Demand small; trend steady; supply ample; 3¢ lb., West Coast.

New York: Demand fair; trend light; supply ample; $35@40 ton.

CORN GLUTEN FEED AND MEAL
(All quotations for all cities are bulk basis, sacked basis $5 more)

Minneapolis: Feed $39.60, meal $66.60.
Atlanta: Feed $43, meal $70.
Birmingham: Feed $41.60, meal $68.60.
Boston: Feed $44.50, meal $71.50.
Chicago: Feed $33, meal $60.
Cleveland: Feed $40.90, meal $67.90.
Denver: Feed $43.20, meal $70.20.
Ft. Worth: Feed $41.70, meal $68.70.
Indianapolis: Feed $38.20, meal $65.20.
Kansas City: Feed $33, meal $60.
Louisville: Feed $40.60, meal $66.60.
New Orleans: Feed $42.90, meal $69.90.
New York: Feed $44.10, meal $71.10.
Norfolk: Feed $43.50, meal $70.50.
Philadelphia: Feed $43.70, meal $70.70.
St. Louis: Feed $33, meal $60.

CORN OIL MEAL

Cincinnati: Demand fair; trend steady; supply adequate; $39.

COTTONSEED OIL MEAL

New Orleans: Demand slow; trend easy; supply normal; $63.50@64 sacked.

Ogden: Supply good; 41%, $70@72.

San Francisco: Demand good; supply tight; 41%, $64; 44%, $67.

Boston: Demand poor; supply light; $73.50.

Philadelphia: Demand fair; supply light; trend unsettled; $73.50.

Kansas City: Demand slow; supply ample; trend steady to stronger; 41% old process, $56@56.50 Memphis.

Los Angeles: Demand slow; supply ample; trend firmer; $62@63.

Memphis: Demand fair; supply limited; trend steady to higher; prime 41% protein, old process, $60 bulk; new process, 41% solvent (no bulk available).

Wichita: Demand fair; supply ample; 41% old process, $67 sacked.

St. Louis: Demand slow; supply adequate; trend steady; solvent, $61.

Portland, Ore.: Demand fair; supply adequate; trend unchanged; $65.

Ft. Worth: Demand fair for meal, good for hulls; supply sufficient on meal, extremely scarce on hulls; 41% old process, $59 f.o.b. mills Ft. Worth; carlots solvent 2% fat added, $56@57 delvd. Ft. Worth, pellets $2 additional; hulls, $28.

Cincinnati: Demand poor; trend steady; supply adequate; $62.

Louisville: Demand fair; trend steady; supply light; new or old process, $66.50 ton, sacked.

Chicago: Demand fair; trend higher; supply adequate; Memphis basis, hydraulic, $55; solvent, $55.

Denver: Demand fair; trend steady; supply ample; $59, truck.

Buffalo: Demand fair; trend higher; supply fair to poor; $70 sacked, Boston.

Omaha: Demand poor; trend strong; supply tight; 41% solvent, $63.70, delivered Omaha.

CURACAO PHOSPHATE

New York: Minimum 14% phosphorus $46.50 sacked, $43.50 bulk, f.o.b. New Orleans, Jacksonville and Philadelphia.

New York: Minimum 14% phosphorus, $46.50 sacked; $43.50 bulk; f.o.b. New Orleans, Jacksonville or Philadelphia.

D ACTIVATED ANIMAL STEROL (POWDERED)

Cincinnati: Demand fair; trend steady; supply ample; 1,500 ICU 11@12¢ lb.; 3,000 ICU 10¢ lb., warehouse.

D ACTIVATED PLANT STEROL (POWDERED)

Chicago: Demand fair; supply ample; 4,000,000 U.S.P. units per lb., 15¢ lb. in ton lots, less than ton lots 17¢ lb.; 12,000,000 units per lb., 5 tons to a carload 23¢ lb., ton lots and less 30¢ lb.

Chicago: Demand fair; supply ample; 4,000,000 U.S.P. units per lb., 15¢ lb. in ton lots, less than ton lots 17¢ lb.; 12,000,000 units per lb., 5 tons to a carload 23¢ lb., ton lots and less 30¢ lb.

DEFLUORINATED PHOSPHATE

Coronet, Fla.: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; guaranteed uniform analysis; carload $66.25, sacked, 100 lb. multiwall bags, bulk $63.25; truck load $67, sacked, in 100 lb. multiwall bags, bulk $64, f.o.b. Coronet, Fla.

Tupelo, Miss.: Minimum phosphorus 14%, minimum calcium 28%, maximum fluorine .14% $57.07, f.o.b. Tupelo in 100 lb. multiwall bags, $54.07 bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum 36%, maximum fluorine .18% $71.80 (or $3.99 per unit of P), f.o.b. Wales in 100 lb. multiwall bags, $3 less in bulk.

Butte, Mont.: Minimum phosphorus 18%, minimum calcium 32%, maximum calcium 36%, maximum fluorine .18%, $81 (or $4.50 per unit of P), f.o.b. Butte, 100 lb. multiwall bags; bulk $78; truck loads of less than 10 tons $10 more, bagged or bulk.

Houston: Minimum phosphorus 19%, minimum calcium 32%, maximum calcium 35%, maximum fluorine .19% $74.35 net ton, f.o.b. Houston, 100 lb., multiwall bags; $71.35 bulk.

Cincinnati: 18% phosphorus $81.03; 14% phosphorus $71.03, f.o.b. Cincinnati.

Portland: Demand fair; supply adequate; trend steady; $93.50, delivered, for product carrying a minimum of 18% phosphorus, 31.5% calcium and a maximum of 0.1% fluorine; $92 dock for a minimum of 10 ton lots.

Cincinnati: 18% phosphorus, $81.03; 14% phosphorus, $71.03, f.o.b. Cincinnati.

Coronet, Fla.: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; guaranteed uniform analysis; carload $66.25, sacked, 100 lb. multiwall bags, bulk $63.25; truck load $67, sacked, in 100 lb. multiwall bags, bulk $64, f.o.b. Coronet, Fla.

Tupelo, Miss.: Minimum phosphorus 14%, minimum calcium 23%, maximum fluorine .14% $57.07, f.o.b. Tupelo in 100 lb. multiwall bags, $54.07 bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum 36%, maximum fluorine .18% $71.80 (or $3.99 per unit of P), f.o.b. Wales in 100 lb. multiwall bags, $3 less in bulk.

DICALCIUM PHOSPHATE

Trenton, Mich.: 18½% P $33, bulk, boxcar/hopper car; $36, bagged, in carloads or truck loads; $96 bagged, in less than carload lots; 21% P, $94.65, bulk, boxcar/hopper car; $97.64, bagged, in carloads or truck loads; $107.65, bagged, less than carload; all prices f.o.b. Trenton, freight equalized with nearest producing point.

Chicago: Bulk 18.5% phosphorus, carlots or trucks $33; 20,000 lb. or more $36 net ton in 100 lb. papers; less than 20,000 lb. $96, basis Chicago Heights, Ill., or Nashville, Tenn.; 21% phosphorus, carlots or trucks, bulk $94.65; 20,000 lb. or more, per net ton in 100 lb. papers, $97.65 and less than 20,000 lb., $107.65, basis Chicago Heights, Ill., or Nashville, Tenn.

Bonnie, Fla.: Minimum prosphorus 18½%, granular, $36 (or $4.65 unit of P), freight equalized from nearest producing point, carload basis; bulk carloads $3 less; in truck loads of less than 10 tons, $10 more. Western slope prices, for delivery at established railroad stations and by truck at regular feed mixing plants; California, Arizona, Nevada and Utah, $99.90; Washington, Oregon, Montana and Idaho, $107.15; bulk carloads $3 less; truckloads less than 10 tons, $10 more.

Columbia, Tenn.: Minimum phosphorus 18½%, minimum calcium 24% $36, f.o.b. Columbia, in 100 lb. multiwall bags; freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Texas City, Texas: Minimum phosphorus 18.5%, minimum calcium 20%, maximum calcium 23%, maximum fluorine .12%; carload and truckload $30.50, sacked in 100 lb. multiwall bags, bulk $77.50, f.o.b. Texas City.

Cincinnati: 18½% phosphorus $92.15, f.o.b. Cincinnati.

Denver: Demand and trend steady; supply ample; $93.50, truckload, delivered.

Denver: Demand stronger; supply ample; trend steady; $93.50, truck delivered.

Cincinnati: 18½% phosphorus, $92.15, f.o.b. Cincinnati.

Chicago: Bulk 18.5% phosphorus, carlots or trucks $33; 20,000 lb. or more $36 net ton in 100 lb. papers; less than 20,000 lb. $96, basis Chicago Heights, Ill., or Nashville, Tenn.; 21% phosphorus, carlots or trucks, bulk $94.65; 20,000 lb. or more, per net ton in 100 lb. papers, $97.65 and less than 20,000 lb., $107.65, basis Chicago Heights, Ill., or Nashville, Tenn.

Bonnie, Fla.: Minimum phosphorus 18½%, granular, $36 (or $4.65 unit of P), freight equalized from nearest producing point, carload basis; bulk carloads $3 less; in truck loads of less than 10 tons, $10 more. Western slope prices, for delivery at established railroad stations and by truck at regular feed mixing plants; California, Arizona, Nevada and Utah, $99.90; Washington, Oregon, Montana and Idaho, $107.15; bulk carloads $3 less; truckloads less than 10 tons, $10 more.

Columbia, Tenn.: Minimum phosphorus 18½%, minimum calcium 24% $36, f.o.b. Columbia, in 100 lb. multiwall bags; freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Texas City, Texas: Minimum phosphorus 18.5%, minimum calcium 20%, maximum calcium 23%, maximum fluorine .12%; carload and truckload $30.50, sacked in 100 lb. multiwall bags, bulk $77.50, f.o.b. Texas City.

DISTILLERS DRIED GRAINS

Boston: Demand active; supply short; $58.

San Francisco: Demand fair; supply ample; solubles, $79 sacked.

Philadelphia: Demand fair; supply light; $57.50.

Cincinnati: Demand poor; trend steady; supply adequate; $53.

Louisville: Bourbon grains, production very low; light, $51 ton, sacked, up $3 ton; dark, $53 ton, sacked, up $3 ton; solubles, $73 ton, sacked, unchanged.

Buffalo: Demand fair to good; supply poor; trend higher; $51, Boston.

DRIED BEET PULP

San Francisco: Demand good; supply fair; $39.80.

Los Angeles: Demand steady; supply ample; trend firmer; $45.40@45.50, new crop.

Ogden: Supply good; $41@46 per ton.

New Orleans: Demand fair; trend easy; supply adequate; $56@57 papers.

Portland, Ore.: Demand good; supply tight; trend steady; $51.60 sacked.

Denver: Demand fair; trend steady; supply limited; $75, f.o.b. Denver, sacked.

Milwaukee: Demand good; trend strong; supply limited; $74.50 ton, Chicago (plain and molasses).

DRIED BUTTERMILK

Los Angeles: Demand slow; trend steady; supply adequate; 12½@13¾¢ lb. sacked.

Ogden: Supply ample; $17.25 per 100 lb. bulk.

San Francisco: Demand fair; supply ample; 13½¢ per lb. sacked.

Boston: Demand fair; supply short; 14¢ lb.

New Orleans: Demand fair; supply ample; trend steady; $13.50@13 cwt. sacked.

DRIED CITRUS PULP

Los Angeles: Demand and trend steady; supply moderate; orange pulp, $33; lemon pulp, $36.

San Francisco: Demand and supply fair; $46 sacked.

New Orleans: Demand good; supply tight; trend steady; $47.50 sacked, f.o.b. Florida points.

DRIED SKIM MILK

Ogden: Supply ample; $17.25 per 100 lb. bulk.

Boston: Demand good; supply short; 12¾¢ lb.

New Orleans: Demand slow; supply normal; trend steady; $12@13.50 cwt. sacked.

Los Angeles: Demand limited; trend steady; supply light; 15¢ lb. less than ton lots sacked; 14¾¢ lb. ton lots sacked.

Ogden: Supply good; $15.15 per 100 lb. drum.

San Francisco: Demand and supply fair; 14½¢ lb. sacked.

Portland, Ore.: Demand fair; supply good; trend steady; 13¢ lb.

Philadelphia: Demand slow; supply fair; $13.

Louisville: Demand slow; trend steady; supply normal; 12@12½¢ lb. sacked.

Buffalo: Demand good; trend steady; supply limited; $12.65 cwt.

Chicago: Demand slow; trend steady; supply good; cwt., sacks, medium acid, $10.75@11; sweet cream, $10.75@11.

Louisville: Demand slow; trend steady; supply ample; 11½@12¢ lb. sacked.

Buffalo: Demand fair; supply ample; trend steady; $13.65 cwt. spray.

Chicago: Demand slow; trend firm; supply ample; cwt., sacks, $10.50@10.75.

Milwaukee: Demand fair; supply limited; trend unchanged; $13.50 cwt.

Milwaukee: Demand fair; supply limited; trend unchanged; $13 cwt.

Minneapolis: Demand fair; supply adequate; price steady at $12.50 cwt.

Cincinnati: Demand fair; trend steady; supply adequate; 12@13¢ lb., sacked.

DRIED WHEY

Louisville: Demand slow; supply normal; trend steady; 5¾@6¢ lb. sacked.

Chicago: Demand quiet; trend firm; supply adequate; cwt., sacks, $4.75.

Philadelphia: Demand slow; supply fair; $6.25 cwt.

Boston: Demand fair; supply good; 5¼¢ lb.

Los Angeles: Demand slow; trend steady; supply adequate; $5.43 cwt., carloads; $5.60 cwt., l.c.l., both sacked.

Ogden: Supply good; $6.90 per 100 lb. bag, sacked.

New Orleans: Demand slow; trend steady; supply normal; $6@6.50 cwt., sacked.

Portland, Ore.: Demand fair; supply adequate; trend steady; $5.95 cwt. sacked.

San Francisco: Demand steady; supply good; $5.75 cwt., sacked.

Ft. Worth: Demand fair; supply adequate; carlots, standard $5.75 cwt. sacked, delivered Ft. Worth; ton lots $6 cwt., f.o.b. warehouse Ft. Worth.

Minneapolis: Demand fair; supply ample; price unchanged at $5.45 cwt.

Denver: Demand and trend steady; supply ample; $5.75 per 100 lb. truck load.

Cincinnati: Demand fair; trend steady; supply adequate; $5.75 cwt., sacked.

FEATHER MEAL (HYDROLYZED)

Los Angeles: Demand light; trend steady; supply adequate; $1 a unit of protein, sacked.

Boston: Demand steady; supply spotty; $69.

Ft. Worth: Demand good; supply sufficient; 85%-87% protein $72.50@75 nominal sacked, f.o.b. trucks north Texas plants.

FISH MEAL

Boston: Demand fair; supply plentiful; $93.

Portland, Ore.: Demand good; supply adequate; trend steady; $1.65 per protein unit, sacked.

San Francisco: Demand slow; supply ample; $1.35 per unit of protein, sacked.

Ogden: Supply ample; $1.50 per unit, f.o.b. Coast; 65%, $110@112.

Los Angeles: Demand slow; supply light; trend steady; local production 60% protein, $1.55 unit, sacked.

New York: Demand fair; trend slow; supply adequate; 60% menhaden meal, $90 sacked, f.o.b. shipping points.

Louisville: Demand slow; trend steady; supply light; $125 ton, sacked.

Chicago: Demand slowed up again; supply liberal; trend steady; sacked: menhaden, East Coast $92@95, Gulf $92@95; menhaden scrap, East Coast $88@91, Gulf $88@91; Canadian herring meal $1.55 a unit of protein.

Buffalo: Demand fair; supply good; trend barely steady; 60% menhaden, $105 bulk; $110 sacked.

Milwaukee: Demand limited; supply adequate; trend weak; $112 per ton sacked, Chicago.

Omaha: Demand good; supply plentiful; trend strong; 60% menhaden, $115, f.o.b. Omaha.

New Orleans: Demand dull; trend easy; supply normal; menhaden 60% $92@95, sacked, f.o.b. Gulf; scrap $89@91, sacked, f.o.b. Gulf.

Ft. Worth: Demand fair; supply sufficient; sacked: 65% protein Peruvian $92, scattered August; 60% protein menhaden $99, delivered Ft. Worth.

Minneapolis: Demand slow; supply ample; Gulf menhaden down $5 to $100@105, sacked, truck lots, Minneapolis; 70% Canadian herring unchanged at $1.60 a unit, f.o.b. West Coast, immediate shipment; Alaskan herring steady at $1.52 a unit, f.o.b. West Coast; West Coast 60% blended steady at $118@121, sacked, delivered Minneapolis.

Denver: Demand medium; trend steady; supply short; $1.52 per protein unit, f.o.b. West Coast.

Cincinnati: Demand fair; trend steady; supply adequate; $132.

HAY

Portland, Ore.: Demand moderate; supply ample; trend unchanged; alfalfa $29@34 per ton, baled, Portland-Seattle.

Los Angeles: Demand fair; supply adequate; U.S. No. 1 Imperial $34@35; U.S. No. 1 $32@34; U.S. No. 2 leafy $29@30; U.S. No. 2 green $30@31; U.S. No. 2 $27@28.

Louisville: Demand very slow; trend steady; supply normal; hay, local, any variety, No. 1 $30@32, No. 2 $28@30; straw, any variety $18@20; new straw now plentiful.

Wichita: Demand low; supply sufficient; new crop, prairie $19@21, alfalfa $18@22, baled.

Boston: Demand quiet; supply ample; No. 2 timothy, $40@43.

Ogden: Supply good; 2nd crop harvested in excellent shape; $20 per ton in the field; $23 per ton in the barn.

Philadelphia: Demand slow; supply light; $24.50@26.50.

Ft. Worth: Demand fair for alfalfa, practically all for others; supply sufficient; carlots, baled, No. 1 alfalfa $42@44; No. 2 $40@43; No. 2 prairie, nominal $30@32; No. 2 Johnson, nominal $28@30, delivered Texas common points.

Cincinnati: Little demand; trend steady; supply adequate; No. 1 timothy $26; wheat or oat straw $18.

HOMINY FEEDS

Memphis: Demand poor; trend steady to higher; supply ample; white, $40.70 bulk; yellow, $40.70 bulk.

Milwaukee: Demand and supply fair; trend unchanged; $42.50 per ton sacked, Chicago; $38 per ton bulk, Chicago.

Louisville: Demand slow; trend steady; supply ample; $46 ton, sacked.

Buffalo: Demand and supply fair; trend steady to higher; $49.50 bulk, Boston.

Chicago: Demand and supply fair; trend unchanged; $39.50.

Boston: Demand fair; supply adequate; nearby, $48.50; October-December, $49.

New Orleans: Demand dull; trend steady; supply light; $47@48.50 sacked.

St. Louis: Demand slow; trend steady; supply ample; yellow, $38.

Kansas City: Demand slow; trend steady to easier; supply ample; white or yellow, $32.50@33.

Cincinnati: Demand poor; trend steady; supply adequate; $41.50.

LINSEED MEAL

Los Angeles: Demand slow; supply ample; trend unchanged; local production 31% protein, $71@72, new crop.

San Francisco: Demand fair; supply ample; $70.

Portland, Ore.: Demand slow; trend higher; supply tight; $84 sacked.

New Orleans: Demand slow; supply light; trend easy; $72.50 bulk; $78.50@79 sacked.

Kansas City: Demand improved; supply adequate; trend steady to stronger; solvent process $52.50@54; old process $58@58.50, Minneapolis.

Milwaukee: Demand limited; supply fair; trend firm; $69 per ton, Chicago (expeller); $64.50 per ton, Chicago (solvent).

Chicago: Demand good; trend steady to higher; supply fair; Minneapolis basis, solvent, $53; expeller, $58.50.

Louisville: Demand slow; trend strong; supply light; old process, $77 ton, sacked, down 50¢ ton; new process, $71.50 ton, sacked, up $1 ton.

Omaha: Demand slow; trend easy; supply ample; 34% solvent, $58.80 bulk; 32% old process, $63.80, Omaha basis.

Wichita: Demand fair; supply ample; 34%, $78 sacked.

Boston: Demand slow; supply ample; $71.

Philadelphia: Demand and supply fair; trend unsettled; 34%, $70.

Ft. Worth: Demand slow; supply sufficient; 34% protein, solvent $69.50 August rail.

Denver: Demand slow; trend steady; supply ample; $71.30 sack, Denver.

Minneapolis: Solvent steady to a little firmer at $53@53.50; expeller at $58.50.

Cincinnati: Demand poor; trend steady; supply adequate; new process $54.50, old process $60.50, Minneapolis.

LIVER AND GLANDULAR MEAL

Omaha: Demand and trend fair; supply plentiful; 65%, $175 sacked, Omaha.

MALT SPROUTS

Chicago: Demand and supply fair; trend firm; sacks, No. 1, in uneven weight bags, $39.50.

Milwaukee: Demand good; supply fair; trend higher; $32@32.50 per ton bulk; $38.50 @39 per ton odd weight; $40.50@41 per ton even weights, 100 lb. bags.

Boston: Demand and supply limited; $48, sacked.

New Orleans: Demand fair; trend easy; supply ample; $37.50@38, sacked.

Cincinnati: Demand fair; trend steady; supply adequate; No. 1, $36.

MEAT AND BONE MEAL

Wichita: Demand fair; supply sufficient; 50%, $77.50 sacked, f.o.b. plant.

Los Angeles: Demand fair; trend steady; supply ample; 50% protein, $1.55 unit.

Ogden: Supply good; $75 per ton, 50% protein, in 100 lb. bags.

San Francisco: Demand fair; supply ample; $1.40 per unit of protein.

New Orleans: Demand slow; trend easy; supply ample; $76@81 sacked.

Omaha: Demand very good; supply short; trend strong; $80 bulk.

Louisville: Demand slow; trend firm; supply good; $76@80 ton, sacked.

St. Paul: Demand slow; supply ample; price unchanged at $77@83.

Cincinnati: Demand good; trend strong; supply fair; 50% meat and bone scraps, $75, Cincinnati.

Chicago: Demand slow; supply ample; trend firm; sacks, 50% protein, $75@80.

Buffalo: Demand fair; trend steady; supply limited; 50% meat scraps, $72.50 bulk; $77.50 sacked.

Portland, Ore.: Demand fair; supply ample; trend lower; $73.50 sacked.

St. Louis: Demand fair; trend steady; supply ample; $72.

Boston: Demand and supply steady; $1.10 per protein unit; converted 50%, $67.50.

Kansas City: Demand good; trend firm; supply ample; 50%, $75.

Ft. Worth: Demand good; supply light; meat and bone 50%, $70 bulk, $73 sacked, f.o.b. Ft. Worth.

Denver: Demand fair; trend strong; supply ample; $67.50, f.o.b. plant.

MILLFEEDS

Minneapolis: Prices down; bran $33.50@34; middlings $36.50; red dog $47.50@49.

Kansas City: Demand slow; trend weak; supply ample; sacked bran, $34.50@35; bulk bran, $30.50@31; sacked shorts, $37.50@38; bulk shorts, $34@34.50; bulk middlings, $31@31.50.

Wichita: Demand very good; supply adequate; basis Kansas City: bran $35.75@36.25, shorts $38.75@39.25 sacked; bran advanced $3 and shorts $1.50, compared with the preceding week.

Ft. Worth: Demand fair; offerings adequate; bran bulk $40, burlaps $43.50@44; gray shorts bulk $43, burlaps $46@46.50; bulk middlings $41.50, delivered Texas common points; bran unchanged to 50¢ higher, shorts 50¢ to $1 lower and midds. unchanged, compared with previous week.

Omaha: Demand poor; trend easy; supply ample; sacked bran, $36; sacked gray shorts, $39; bulk standard midds., $33, all Omaha basis.

St. Louis: Sacked bran, $40; shorts, $43; bulk bran, $35; middlings, $36.

Cincinnati: Demand fair; trend steady to higher; supply adequate; bran, $39; middlings, $42.

Boston: Demand improved; supply adequate; bran, $45; middlings, $47.

Philadelphia: Demand and supply fair; trend unsettled; bran, $43.50; standard middlings, $46.50; red dog, $61.50.

New Orleans: Demand good; trend easy; supply ample; sacked bran, $45.50@46.25; bulk bran, $41.50@42.25; sacked shorts, $49@49.75; bulk shorts, $45@45.75; bulk midds., $43.50@44.25.

Louisville: Demand fair to good; supply ample; trend strong; bran, $47.10 ton, sacked, up $2.50 ton; mixed feed, $49.10 ton, sacked, up $2 ton; shorts, $51.60 ton, sacked, up $1.50 ton.

Memphis: Demand fair; trend higher; supply ample; wheat bran, $39.70 bulk; gray shorts, $42.30 bulk; standard midds., $40.70 bulk.

Portland, Ore.: Demand fair; supply tight; trend higher; $39@40.

Ogden: Supply good; To Utah and Idaho: Red bran and millrun, $34; midds., $39. To Denver: Red bran and millrun, $41; midds., $46. To California: Red bran and millrun, $41.50; midds., $46.50, f.o.b. San Francisco and Los Angeles.

Denver: Demand and supply fair; trend steady to easier; shorts $42, bran $39, millrun $40.50.

San Francisco: Demand slow; supply ample; millfeed, $42.50; red bran, $46.75.

Los Angeles: Demand steady; short supply; trend firmer; standard millrun, $44@44.50; red bran, $48.

MINERAL FEED

Portland, Ore.: Demand good; trend steady; supply ample; $44@48 sacked.

Ogden: Supply ample; $113 per ton in 50 lb. blocks; $103 per ton, granular 50 lb. bags.

Wichita: Demand good; supply sufficient; all-purpose with iodine, 50 lb. blocks $97.50, 100 lb. bags $92.50, f.o.b. plant.

Sioux City: 50 lb. mineral blocks 8.2% phosphorus $93; 7.5% phenothiazine sheep mineral blocks $4 each.

Ft. Worth: Demand fair; supply adequate; all-purpose granules $90, block $70; mineral phosphorus 6% granules $106, block $113; cattle-sheep mineral 7% phosphorus granules $100, block $107; hog mineral phosphorus 3¾% granules $87, phosphorus 2% $77 (all in 50 lb. paper bags).

San Francisco: Demand steady; supply good; all-purpose with iodine $70, sacked.

MOLASSES

Buffalo: Demand fair; trend steady; supply good; 14¢ per gal., f.o.b. Albany.

Louisville: Demand fair; supply normal; trend strong; 10¢ gal., tank car lots, f.o.b. Gulf ports.

New York: Demand fair; supply adequate; trend slow; 14¢ gal., Albany; 13½¢ Baltimore and New York; $28 per ton Buffalo.

Milwaukee: Demand fair; supply ample; trend firm; 9¾@10¢ per gal., f.o.b. New Orleans.

New Orleans: Demand fair; trend steady; supply good; 8½@9¢ gal., tank cars and trucks; 600 lb. customers' drums $6.90.

Kansas City: Demand fair; supply tight; trend strong; blackstrap 10@10½¢ gallon, f.o.b. New Orleans.

Memphis: Demand fair; trend steady to higher; supply ample; blackstrap, 10¢ per gallon, tank car, f.o.b. New Orleans.

Los Angeles: Demand excellent; trend steady; supply ample; $20.50, f.o.b. tank cars; $20.75, f.o.b. tank trucks.

Cincinnati: Demand fair; trend steady; supply adequate; 10¢ gal., New Orleans.

Minneapolis: Price holding steady at $30 tank truck, delivered.

San Francisco: Demand and supply good; $20.75, f.o.b. cars, Richmond, Cal.

Boston: Demand improved; supply adequate; 14¢ gallon in tank cars.

St. Louis: Demand slow; supply adequate; trend strong; 10½¢ gal. tank car, New Orleans.

Ft. Worth: Demand fair; supply sufficient; blackstrap 10½¢ gal., f.o.b. Houston; delivered Ft. Worth truck $24.65, seller's market price on date of shipment.

Denver: Demand fair; trend steady; supply ample; 9¢ per gal., New Orleans; $30.30 ton, Denver.

NIACIN

New York: 50% $1@1.20 lb.

OAT PRODUCTS

Chicago: Demand easier; trend lower; supply fair; reground oat feed, $30; No. 1 fine ground feeding oat meal, $71; feeding rolled oats, $75.

Louisville: Demand fair; trend almost stationary; supply normal; reground, $31.30 ton, sacked, down 50¢ ton; rolled, $32.80 ton, sacked, unchanged; feeding, $78.50 ton, sacked, unchanged; pulverized, $52.50 ton, sacked, up 20¢ ton; crimped, $67.30 ton, sacked, down 50¢ ton.

Philadelphia: Pulverized white, demand slow, supply fair $49; domestic demand slow, supply light $31; Canadian oatfeed demand slow, supply light, $32.50 sacked.

Ft. Worth: Demand slow; supply sufficient; oat millfeed, 10% protein, $42.20, reground $31.20 sacked, new jutes.

Boston: Demand good; supply fair; white pulverized, sacked, $56; reground oat feed, sacked, $34.

Los Angeles: Demand slow; trend un-

changed; supply limited; local production pulverized, $62 sacked.

Memphis: Demand poor; trend weaker; supply ample; 2½% protein, reground oat-feed, $30.75 bulk.

Cincinnati: Demand poor; trend steady; supply adequate; pulverized white oats $47 @53.

Minneapolis: Market unchanged; feeding rolled oats $77; feeding oatmeal $66; pulverized $45.50; reground oat feed $24; crimped $59.50.

Portland, Ore.: Demand limited; supply more plentiful; trend lower; $53@54.50.

OYSTER SHELL

Boston: Demand and supply steady; $26.05 in paper.

Louisville: Demand slow; trend steady; supply good; in 80 lb. paper sacks $23.45, in 50 lb. paper sacks $23.70, in 25 lb. paper sacks $25.95.

San Francisco: Demand fair; supply ample; local $15, Eastern $26, sacked.

New Orleans: Demand and supply good; trend steady; $25@26 papers.

Los Angeles: Demand steady; trend unchanged; supply ample; $15.40 sacked.

Portland, Ore.: Demand fair; supply adequate; trend steady; $27@28 sacked.

PEANUT OIL MEAL

Milwaukee: Demand and supply fair; trend unchanged; 36% $42 sacked, $38 bulk, both Chicago.

PEAT MOSS

Chicago: Demand and supply fair; trend firm; standard 7½ cu. ft. bale $3.80.

Cincinnati: Demand and supply good; trend steady; truck loads $3.45 bale, f.o.b. Cincinnati.

Portland, Ore.: Demand slow; supply adequate; trend unchanged; $3@3.15 per 5.6 cu. ft. bale.

Los Angeles: Demand steady; trend unchanged; supply ample; Canadian 5.6 cu. ft. bales, $3.65.

Boston: Demand and supply steady; $3.15 bale.

Philadelphia: Demand and supply fair; $2.99, f.o.b. pier.

San Francisco: Demand and supply fair; $3.65 per bale.

POTASSIUM IODIDE U.S.P.

Cincinnati: Demand good; trend steady; 90% KI in calcium stearate or carbonate mixtures: 250 lb. drums, $1.35; 200 lb. in 100 lb. drums, $1.35; 100 lb. drums, $1.38; 25 lb. drums, $1.41, f.o.b. Cincinnati.

Chittenango, N.Y.: Demand good; trend firm; supply ample; standard blends, 90% KI, 10% stearate or carbonate mixture: 100 lb. drums $1.26½ lb.; 200 lb. and up $1.23½ lb., all delivered.

POULTRY BY-PRODUCTS

Boston: Demand fair; supply tight; $75.

Los Angeles: Demand light; supply adequate; trend steady; $1.40 unit of protein, sacked.

Ft. Worth: Demand good; supply scarce; 55% protein, $78@82.50 nominal, sacked, f.o.b. north Texas plants.

RIBOFLAVIN

Cincinnati: Trend steady; feed grade (in feed supplements) 4¢ gram in less than ton lots in 3.36 to 16 gm./lb. mixtures; 3¢ in ton lots or more, freight prepaid or paid to destination.

New York: $40 kilo in 4 and 16 gm./lb. mixtures.

RICE BY-PRODUCTS

San Francisco: Demand good; supply ample; bran, $43 sacked; polish, $47 sacked.

Los Angeles: Demand limited; supply light; trend steady; California production high fat content, bran, $48 sacked.

Ft. Worth: Demand slow; supply limited; rice bran, $32@33, f.o.b. south Texas rice mills; hulls, $5.50 sacked, f.o.b. mills.

SCREENINGS

Buffalo: Demand fair; trend higher; supply poor; ground in sacks, $36 N.Y., L&R; unground in bulk, $31 N.Y.

Cincinnati: Demand fair; supply adequate; trend steady; unground grain screenings, $22@23, Cincinnati.

Minneapolis: Finally, some Canadian supplies available, at $26; very few domestics; lights at $13@23, mediums $24@33, heavies $34@43; 15% at $40.

Chicago: Demand and supply fair; trend unchanged; ground grain, $34; Canadian $23.50.

SOFT PHOSPHATE WITH COLLOIDAL CLAY

(Sacked)

Atlanta: $20.40@20.67.
Buffalo: $26.31@26.45.
Chicago: $24.77@24.90.
Cincinnati: $23.47@23.60.
Des Moines: $25.23@25.35.
Kansas City: $24.86@25.
Memphis: $22.20@22.47.
Minneapolis: $25.92@26.06.
Philadelphia: $24.32@24.95.
St. Louis: $24.14@24.27.

SORGHUM

Los Angeles: Demand steady; supply adequate; trend weaker; milo, $2.12½ cwt.

Ft. Worth: Demand fair; supply sufficient; No. 2 yellow milo, $1.93@1.95 per cwt. delivered Texas common points.

Ogden: Supply ample; $43@44 per ton.

SOYBEAN OIL MEAL

Wichita: Demand good; supply ample; 44% $63, 50% $69, sacked; 44% $60, 50% $66 bulk, f.o.b. Wichita.

Philadelphia: Demand and supply fair; 44%, $49.50 bulk, Decatur.

Milwaukee: Demand and supply fair; trend unchanged; $50.50 per ton, bulk, Decatur.

Omaha: Demand poor; supply ample; trend easy; 44%, $53.60 delivered Omaha.

Louisville: Demand fair; trend strong; supply light, bit scarce; $62.90 ton, sacked, up $1 ton.

Memphis: Demand fair; trend steady; supply ample; prime 44% solvent, $53.50, f.o.b. Memphis.

Cincinnati: Demand fair; trend steady; supply adequate; $51@51.50, Decatur.

Minneapolis: Slow feed demand and heavy production have pushed price down from $46 last week to $44@44.50.

Los Angeles: Demand fair; trend steady; supply adequate; $73.90.

Boston: Demand improved; supply steady; 44%, $49; 50%, $54, both f.o.b. Decatur.

Kansas City: Demand slow; supply ample; trend steady; 44% solvent process, $48.50@49, Decatur.

New Orleans: Demand dull; supply good; trend easy; $59@60 bulk; $61@63 sacked.

Denver: Demand good; trend steady; supply ample; 44%, $62.50.

Ogden: Supply ample; 41% protein, $69@71 (50% protein, $74@76).

San Francisco: Demand fair; supply ample; $72.90.

St. Louis: Demand slow; trend steady; supply ample; 44%, $54.

Portland, Ore.: Demand fair; supply adequate; trend higher; $73.40.

Ft. Worth: Demand fair; supply sufficient; 44%, $60.60 August; $62 September-October-November-December; 50%, $67.60 August; $70 September-October-November-December.

TANKAGE

Kansas City: Demand slow; trend easy; supply ample; 60% digester, $69@70.

Wichita: Demand fair; supply sufficient; 60%, $77.50 sacked, f.o.b. plant.

New Orleans: Demand slow; supply good; trend steady; 60%, $76@81 sacked.

St. Louis: Demand fair; supply ample; trend steady; $73.

Chicago: Demand quiet; trend steady; supply fair; sacks, 60% protein, $75@80.

Cincinnati: Demand good; supply ample; trend steady; 60% digester, $75, Cincinnati.

St. Paul: Slow demand; supply ample; unchanged at $75@80.

Louisville: Demand slow; trend steady; supply good; $75@80 ton, sacked.

Omaha: Demand very good; trend strong; supply short; $80.

Ft. Worth: Demand fair; supply ample; 60% digester, $76 sacked, Ft. Worth.

VEGETABLE AND ANIMAL FAT (HYDROLYZED)

Ft. Worth: Demand good; supply limited; 5¢ lb., f.o.b. south Texas area.

VITAMIN E FEED SUPPLEMENT

Cincinnati: Demand good; trend steady; 50 lb. or more $1.45, less than 50 lb. $1.50, freight allowed to destination.

WHEAT GERM MEAL

New Orleans: Demand fair; trend easy; supply tight; $66@68, cottons.

Buffalo: Demand and supply fair; trend steady to higher; commercial grade $60, sacked, f.o.b. Buffalo.

Minneapolis: Price down again slightly to $56.

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SYSTEMS

(Continued from page 1)

try industry in the Northeast authorized by the committee at its kickoff meeting last January. Included in the report of this study was the first draft of a proposed standard egg production record form.

Purpose of Form

Purpose of the form, the report stated, is the standardization of records and establishment of a common language and terminology for use in production record-keeping. The form is designed to be kept in units of days and weeks (not months) and to provide constant, up-to-date information on eggs per hen housed, feed per hen housed and percentage of livability. It would also establish a standard laying year starting at 20 weeks of age and running through 80 weeks of age. Such a form, the report emphasized, will set the stage for tying all the other problems to one set of records and a standard terminology.

A preliminary draft of the form will be checked by college experts as well as members of the American Feed Manufacturers Assn. When approved, it will be made available to the industry.

A simple, yet adequate system of poultry record keeping is vital to the well-being of the industry, the committee agreed. As Carroll Dunham, NEPPCO vice president who heads the group, declared: "The intelligent use of credit depends upon a thorough knowledge of financial structure of the poultry business. To get financing in today's tight money market, the poultryman must be able to compare his cost and income figures not only with his own past performance, but also with industry averages. He must be able to evaluate his success potential in relation to economic trends both within and without his industry."

To hurdle farmer resistance to record keeping, the committee concluded that an acceptable system must be not only standardized but also simplified. In this fashion, it could provide the "bench marks" that would enable poultrymen and those who extend credit to accurately compare one operation with another.

Introduction Through School

The proposed standard system of poultry record keeping, the committee agreed, might be introduced to the industry by some type of "school" with its first target those in the credit field such as bankers, accountants, feed industrymen, equipment dealers and hatcherymen. It would be aimed at teaching the business of egg, broiler and turkey production and marketing backed by the type of "chicken arithmetic" needed to make an accurate evaluation.

"Not only must we supply poultrymen with the necessary tools to measure their financial success and credit standing, but we must go one step further by making these tools the norm of the financial world as well," Mr. Dunham concluded.

The committee plans to meet again in the fall after the production record forms have been finalized and the first draft of a uniform accounting system developed.

In addition to Mr. Dunham, those attending the Washington session included Dean McNeal, chairman of the board of AFMA and executive vice president of The Pillsbury Co., Minneapolis; Dr. John C. Hammond, AFMA director and vice president and treasurer of O. A. Newton & Son Co., Bridgeville, Del.; Dr. Paul E. Newman, former AFMA director and executive vice president of the Beacon Milling Co., Division of Spencer Kellogg & Sons, Inc., Cayuga, N.Y.; J. D. Sykes, AFMA director and vice president of Ralston Purina Co., St. Louis; W. E. Glennon, AFMA president; Oakley M. Ray, AFMA director of market research; Ernest F. Smith, Jr., NEPPCO president; Dr. Alfred Van Wagenen, NEPPCO director of research and development, and Richard I. Ammon, NEPPCO executive secretary.

AWARD

(Continued from page 1)

authored 25 scientific papers in the last three years on nutrition of turkeys and has contributed basic information applicable to practical feeding. Most of his research work has centered on the amino acids, trace elements, pigments, inhibitors and muscular dystrophy. His discovery of the binding action on zinc by soybean protein and its release by a chelating agent, may be of extreme importance in animal utilization of other nutrients, it was stated.

New Yorker

Dr. Kratzer is a native of New York state and graduated from Cornell University with a B.S. degree in poultry husbandry. He then moved to the University of California as a research assistant and was awarded his Ph.D. degree in animal nutrition. Thereafter, he was named associate professor of poultry husbandry at the Colorado A & M College. In 1945, he returned to the University of California as assistant professor and rose through the ranks as associate professor in 1949 and professor in 1955.

Dr. Kratzer is a member of the American Association for the Advancement of Science, the American Chemical Society, the Society for Experimental Biology and Medicine, the American Institute of Nutrition and Poultry Science Assn.

13th Winner

He is the 13th poultry scientist to receive the annual AFMA poultry nutrition award. Previous winners were: Dr. Hans Fisher, Rutgers University (1959); Dr. Fredric W. Hill, Cornell University (1958); Dr. Lloyd D. Matterson, University of Connecticut (1957); Dr. J. S. Slinger, Ontario Agricultural College (1956); Dr. H. M. Scott, University of Illinois (1955); Dr. E. P. Singsen, University of Connecticut (1954); Dr. G. F. Combs, University of Maryland (1953); Dr. M. L. Scott, Cornell University (1952); Dr. J. R. Couch, Texas A & M College (1951); Dr. W. W. Cravens, University of Wisconsin (1950); Dr. James McGinnis, State College of Washington (1949) and Dr. H. R. Bird, U.S. Department of Agriculture (1948).

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Hog, Dairy Prices Help Improve Index Of Farmers' Prices

WASHINGTON — Seasonally higher prices for dairy products led an advance of four-fifths of 1% in the index of prices received by farmers to 238% of its 1910-14 average during the month ended July 15, the U.S. Department of Agriculture announced.

Also contributing to the advance were higher prices reported for most vegetables, cotton, hogs and potatoes. Most important price declines were reported for cattle, peaches and wheat, and the mid-July index still was slightly more than 1% below a year earlier.

For the third consecutive month, feed prices drifted downward, with the index off a half of 1% since mid-June to 195, USDA notes. This was the lowest since last December, and 2% below last July when the index was 199. The index fell from 198 in mid-May to 196 in mid-June to the 195 figure in mid-July. The index still is well below the 231 10-year average for feed prices paid by farmers.

The usual upturn in wholesale milk prices from the seasonal low in June was primarily responsible for the 4% rise in this index during the month, USDA notes. At 244% of its 1910 average in mid-July, it was about 1% higher than a year earlier. It equalled the indexes for July 1956 and 1957, and, with these exceptions, was the highest for the month since 1953. Farmers received an average of $3.96 per hundred lb. for milk sold wholesale to plants and dealers during July. This was 16¢ more than in June and 4¢ more than for July, 1959. The average price received for milkfat in cream in mid-July was practically unchanged from both a month and a year earlier. Mid-July prices received for milk sold by farmers directly to consumers averaged about 1% more than both a month and year earlier.

For the second consecutive month, prices received by farmers for hogs increased as prices for other species receded. As a result, the meat animal index changed only slightly from June, a 3 point (1%) decline to 302. Marketings of cattle during the four weeks ending July 16 were down slightly from the previous four weeks and slightly above a year earlier. Marketings of hogs, however, during the four-week period were down 8% from the preceding four weeks and 10% below a year earlier, as indicated by receipts at leading markets. The index was down from the April and May level—the highest so far this year—and was 4% below a year earlier.

A reduction in the seasonally adjusted index of farm wage rates was primarily responsible for the third of 1% decline in the index of prices paid for commodities, interest, taxes and farm wage rates during the month ended July 15. Wage rates rose, but less than usual. At 298, the parity index was the highest July index of record, 1% under the high recorded last April.

As the index of prices received advanced during the month and the index of prices paid including interest, taxes and farm wage rates declined, the parity ratio rose one point to 80, which was 1% below a year earlier.

Feed: Average Prices Paid by Farmers, U.S., July 15, 1960 with Comparisons

Commodity and unit	July 15, 1959	June 15, 1960	July 15, 1960
	—dollars—		
Alfalfa hay, baled, ton	28.4	30.4	29.7
Other hay, baled ton	26.1	28.0	28.0
Cottonseed meal, 41%, cwt.	4.20	4.05	4.04
Soybean meal, 44% cwt.	4.26	4.05	4.03
Bran, cwt.	2.77	2.86	2.78
Middlings, cwt.	2.93	2.93	2.92
Corn meal, cwt.	3.25	3.16	3.15
Scratch grain, cwt.	3.93	3.87	3.86
Laying mash, cwt.	4.47	4.33	4.31
Poultry ration costs, cwt.	3.43	3.36	3.34
Broiler growing mash, cwt.	4.85	4.67	4.64
Turkey growing mash, cwt.	4.82	4.62	4.62
Chick starter mash, cwt.	4.97	4.81	4.78
Mixed dairy feed, under 29% prot., cwt.	3.67	3.63	3.62
Mixed dairy feed, over 29%, cwt.	4.44	4.39	4.36
Mixed hog feed, 14-18%, cwt.	4.11	4.02	3.98
Mixed hog feed, over 29%, cwt.	5.39	5.22	5.14
	—index numbers— (1910-14=100)		
Feed, prices paid by farmers	199	196	195

Farm Commodity-Feed Price Ratios

	U.S.	New Eng.	Mid-Atl.	East North Cent.	West North Cent.	South Atl.	East South Cent.	West South Cent.	Mount.	Pac.
CHICKEN-FEED—										
Farm Chickens:										
July, 1960	3.7	4.0	4.5	3.9	3.3	3.8	3.6	3.3	3.4	2.7
June, 1960	3.8	4.6	4.7	4.0	3.1	4.0	3.6	3.3	3.2	3.0
July, 1959	3.2	3.5	4.1	3.3	2.4	3.5	3.4	3.2	3.3	2.7
Average (1949-58)	5.5									
Average (July, 1949-58)	5.3									
Broilers:										
July, 1960	3.9	4.3	4.7	4.0	4.0	3.8	3.6	3.8	4.0	4.0
June, 1960	3.8	4.1	4.5	3.9	4.0	3.7	3.6	3.8	3.9	4.0
July, 1959	3.3	3.5	4.2	3.7	3.5	3.2	3.1	3.2	3.6	3.7
TURKEY-FEED—										
July, 1960	6.9	7.8	8.0	7.0	8.3	6.2	7.1	6.6	6.9	6.2
June, 1960	7.1	7.7	8.6	7.8	8.3	6.4	7.0	6.9	6.6	6.6
July, 1959	6.5	6.8	8.0	6.8	7.4	6.0	5.9	6.3	6.4	5.8
Average (1949-58)	8.4									
Average (July, 1949-58)	8.0									
EGG-FEED—										
July, 1960	9.4	12.5	8.9	8.7	8.7	10.5	10.0	9.3	9.9	8.2
June, 1960	9.3	11.4	9.9	8.9	8.8	10.2	10.1	9.3	9.3	8.0
July, 1959	8.9	12.2	10.2	7.9	7.8	9.7	9.2	8.3	9.5	7.8
Average (1949-58)	11.1									
Average (July, 1949-58)	10.5									

	U.S.	North Atl.	East North Cent.	West North Cent.	South Atl.	South Cent.	West
MILK-FEED—							
July, 1960	1.38	1.33	1.36	1.49	1.60	1.44	1.30
June, 1960	1.31	1.21	1.30	1.44	1.56	1.38	1.26
July, 1959	1.33	1.33	1.26	1.44	1.57	1.39	1.28
Average (1949-58)	1.30						
Average (July, 1949-58)	1.20						
BUTTERFAT-FEED—							
July, 1960	24.7	...	20.9	27.1	...	17.0	18.7
June, 1960	24.4	...	20.6	26.8	...	16.6	18.4
July, 1959	24.0	...	19.9	26.4	...	16.2	18.2
Average (1949-58)	22.2						
Average (July, 1949-58)	21.4						

	U.S.	North Cent.
HOG-CORN—		
July, 1960	15.2	15.7
June, 1960	14.8	15.1
July, 1959	11.9	12.0
Average (1949-58)	14.0	14.3
Average (July, 1949-58)	14.0	14.2

NOTE: Ratios computed at mid-month by U.S. Department of Agriculture. Ratios represent number of pounds of poultry feed equal in value to 1 lb. live farm chicken, turkey or 1 doz. eggs; pounds broiler growing mash equal to 1 lb. broiler; pounds concentrate rations equal to 1 lb. milk or butterfat; bushels of corn equal to 100 lb. hog. Increases in ratios are favorable to the feeder.

KEY TO GEOGRAPHICAL DIVISIONS

Here is a guide to the states included in the geographical divisions listed in the accompanying commodity-feed price ratios:

New England: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.

Mid-Atlantic: New York, New Jersey, Pennsylvania.

North Atlantic: New England and Mid-Atlantic states combined.

East North Central: Ohio, Indiana, Illinois, Michigan, Wisconsin.

West North Central: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

North Central: Combination of the two foregoing.

South Atlantic: Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

East South Central: Kentucky, Tennessee, Alabama, Mississippi.

West South Central: Arkansas, Louisiana, Oklahoma, Texas.

South Central: Combination of the two above.

Pacific: Washington, Oregon, California.

Mountain: Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Montana.

West: Combination of the two above.

GALVIN

(Continued from page 1)

excess of the 10-year (1949-58) average.

One cannot help but wonder about this matter of corn production. The combined 1958, 1959 and 1960 crops (latter one based on Mr. Galvin's estimate) make a total of 12,354 million bushels for an average of 4,118 million bushels. Lay that figure alongside the 1949-58 average and one finds that the average for these last three years exceeds the long-term average by 850 million bushels. These nonrecourse loans at levels well in excess of the open market price have done almost as much to increase corn production as did the perfection of all of the numerous hybrid strains.

Forecast Comparisons

Table 1 shows Mr. Galvin's August, 1960 forecast, the July 1 official one, final for 1959, and the 10-year average for the 10 main corn producing states.

Corn Plant Condition

Touching on the subject of the condition of the growing corn plant, Mr. Galvin sets it at 82% vs. 87% of normal a year ago. Despite the late start in the central states, he said, the crop generally has made rapid growth. In the southwestern group of states, prospects run from good to excellent but in portions of the south central Gulf area, they are somewhat below normal. The northwestern states have suffered some damage and the crop generally would benefit from moisture.

As to oats, there has been a marked pickup in the yield per acre prospect according to this crop expert. Mr. Galvin sets the national figure at 45.2 bu. to the acre. This is far ahead of both last year's final and the 10-year averages of 37.7 and 35.7 bu., respectively. Mr. Galvin's Aug. 1 estimate for the national oat crop calls for a production of 1,239 million bushels. This is nearly 100 million bushels more than the government figured a month ago and while well above last year's small crop, it will fall short of the 10-year average by about 65 million bushels. Roughly speaking, the states that are the largest producers of corn are also the banner ones on oats—the sole exceptions being addition of North Dakota and deletion of Missouri. Details covering production in the 10 main oat producing states are given in Table 2.

Wheat Production

Mr. Galvin's figures on wheat production as of Aug. 1 show a cut of 10 million bushels on spring, but this was more than offset by his boost of 34 million bushels on winter wheat. The latter was due to revisions because of the exceptionally high yields in Colorado, Nebraska and both western and northwestern Kansas. On the other hand, he whittled down the spring wheat prospect in both Dakotas and much of Montana due to the scorching hot temperatures which forced maturity and brought on lower yields per acre especially on late planted fields. Mr. Galvin's estimates call for 247,413,000 bu. on spring and 1,124,157,000 bu. on winter wheats.

As in the case of corn, his estimate on soybeans at 557,342,000 bu. came as a surprise to many in the trade because of the backwardness of the crop as a whole up to late July, particularly in some of the northern areas. As in corn again, he showed a remarkably high yield per acre at 23.6 bu.—within 4/10 of a bushel of last year's official one.

TABLE 1—Corn Production for 10 States (final 000,000 omitted)

	Galvin Aug., 1960	July 1960	Final 1959	10 yr. avg. 1949-58
Ohio	245,952	238,144	250,992	196,896
Indiana	339,698	345,177	336,350	253,895
Illinois	621,120	631,472	673,350	511,523
Michigan	119,932	109,968	125,571	85,949
Wis.	152,130	143,832	179,790	142,251
Minn.	333,999	320,901	334,278	271,708
Iowa	737,006	698,885	830,346	564,790
Missouri	255,465	238,434	257,345	154,201
So. Dak.	129,600	113,400	79,774	105,923
Neb.	333,183	333,183	350,906	209,117

TABLE 2—Oat Production in 10 States (final 000 omitted)

	Galvin Aug., 1960	July 1960	Final 1959	10 yr. avg. 1949-58
Ohio	64,790	55,385	52,256	47,835
Indiana	47,340	41,028	32,175	49,139
Illinois	100,594	91,104	89,320	137,341
Michigan	40,333	31,201	38,540	47,686
Wis.	122,564	101,351	128,100	134,134
Minn.	211,205	203,235	176,763	186,760
Iowa	187,726	175,483	186,490	213,827
No. Dak.	74,196	70,074	30,538	52,980
So. Dak.	114,996	106,782	40,385	94,171
Neb.	48,926	36,618	29,326	47,834

Red Meat Output Up 9% from 1959

WASHINGTON — Output of red meat by commercial slaughter plants totaled 2,241 million pounds in June, 9% above June, 1959, according to the U.S. Department of Agriculture. This was approximately the same as the May, 1960, production. Commercial meat production includes slaughter in federally inspected and other commercial slaughter plants but excludes farm slaughter.

Production of red meat for the first six months of the year totaled 13,462 million pounds, 7% above the 12,540 million pounds produced in the corresponding period of 1959.

Of the January-June production, 6,982 million pounds were beef, up 9% from last year; 469 million pounds were veal, up 8% from last year; 5,642 million pounds were pork, up 5% from the preceding year, and 369 million pounds were lamb and mutton, up 1% from 1959.

Six-Month Beef Slaughter

The number of cattle slaughtered during the six month period was 10% above that for the comparable period of 1959. The number of calves was up 4%; hog slaughter was up 6%, and sheep and lamb slaughter was up 1%.

Beef production during June, 1,244 million pounds, was 12% above the 1,109 million pounds produced in June, 1959. The number of cattle slaughtered for the month totaled 2,196,700 head, 14% above the 1,926,000 head in June, 1959, and 5% above May, 1960. June slaughter cattle averaged 995 lb. per head live weight. This was 13 lb. less than June, 1959, and 10 lb. less than May.

Veal production was 85 million pounds, up 12% from both June, 1959, and May, 1960. The number of calves slaughtered this June totaled 624,000 head, 11% above June, 1959, and 8% above May. Calves slaughtered weighed 247 lb. per head live weight, 12 pounds more than June, 1959, and 11 lb. more than May.

Pork Production

Pork production for June totaled 852 million pounds, 3% above a year earlier, but 6% below a month earlier. The hog kill for June was 6,097,400 head, 4% above a year earlier, but 6% below a month earlier. The average live weight of hogs slaughtered during June was 242 lb. per head, 4 lb. less than a year earlier but 3 lb. more than a month earlier.

Lamb and mutton production in June was 60 million pounds, 11% above a year earlier, but 2% below a month earlier. Sheep and lambs slaughtered during the month totaled 1,311,100 head, 10% above a year earlier and 4% above a month earlier. Live weight of sheep and lambs slaughtered during June averaged 95 lb. per head. That was 1 lb. more than a year earlier, but 3 lb. less than a month earlier.

Chicks Placed in Principal Broiler Areas

(000's omitted)

Week ending	Maine	Conn.	Penn.	Ind.	Ill.	Mo.	Del.	Md.
May 28	1,214	483	756	958	167	777	2,436	2,130
June 4	1,144	456	832	1,082	127	768	2,319	2,152
June 11	1,145	436	828	908	91	746	2,208	2,342
June 18	1,231	456	872	849	70	789	2,212	2,246
June 25	1,159	482	711	782	111	765	2,198	2,261
July 2	1,161	516	821	756	133	815	2,202	2,173
July 9	1,158	440	758	772	107	760	2,176	2,154
July 16	1,155	534	831	800	109	739	1,868	2,233
July 23	1,110	396	752	737	114	924	1,887	2,271
July 30	1,114	415	788	749	84	787	1,786	2,212

Week ending	Va.	W. Va.	N.C.	S.C.	Ga.	Fla.	Ala.	Miss.
May 28	1,474	573	3,556	386	8,078	251	4,351	2,744
June 4	1,368	528	3,489	355	7,923	233	4,442	2,608
June 11	1,325	621	3,526	386	7,873	229	4,410	2,687
June 18	1,199	608	3,504	340	7,710	213	4,248	2,703
June 25	1,127	589	3,584	375	7,490	233	4,104	2,775
July 2	1,178	574	3,356	340	7,449	204	4,265	2,695
July 9	1,132	626	3,364	377	7,298	209	4,057	2,706
July 16	1,258	626	3,237	401	7,142	212	3,956	2,511
July 23	1,208	683	3,235	324	6,776	243	3,934	2,463
July 30	1,303	508	3,077	296	6,640	198	3,659	2,191

Week ending	Ark.	La.	Texas	Wash.	Oregon	Calif.	Total 22 areas 1960	Total 22 areas 1959
May 28	4,519	481	2,706	349	233	1,087	39,709	34,578
June 4	4,406	533	2,658	385	290	1,142	39,360	34,791
June 11	4,376	482	2,591	360	268	1,236	39,118	35,135
June 18	4,348	589	2,473	284	262	1,197	38,448	34,516
June 25	4,279	551	2,482	389	329	1,133	38,189	34,136
July 2	4,200	556	2,331	349	270	1,105	37,449	34,340
July 9	4,044	449	2,217	326	301	1,098	36,547	33,667
July 16	4,046	442	2,179	344	358	1,018	35,821	33,881
July 23	3,801	411	2,113	354	324	920	34,098	33,455
July 30	3,642	433	2,126	389	228	947	33,491	32,044

Pillsbury Co. Sets Sales Record; Net Earnings Rank 2nd

MINNEAPOLIS — The Pillsbury Co. recorded a new peak in sales during the fiscal year ended May 31. Sales totaled $373,818,795, up $8,479,653 from the preceding year, according to the company's annual report.

Net earnings of $6,541,094 were down $1,371,951 from last year. Earning per share equalled $3.04 compared with $3.80 last year.

In the firm's 91st annual report, Paul S. Gerot, president, and Philip W. Pillsbury, board chairman, commented on the following activities of the year:

Capital expenditures of $9,415,000 for new plants and the modernization and expansion of existing plants; developments in research and technological areas which will support product growth in new and existing fields; new products for new and existing markets; the entry into the non-food consumer field with the Tidy House line of cleaning products and the development of business in foreign countries.

They said earnings were reduced by adverse economic conditions in the formula feed, soy processing and commodity merchandising industries; higher marketing expenditures for consumer products; lower margins and by-product recoveries from the sale of bakery flour and strikes at two major plants.

Agricultural Upturn

The annual report said of the agricultural area of the firm's operations, that the formula feed division should see an upturn. It states that the agricultural industry shows signs of pulling out of the unfavorable economic period which has been prevalent during the past 18-24 months.

To take advantage of revolutionary changes in the feed industry, Pillsbury's feed division has, during the last six months, initiated changes within its organization and has altered the concept of "doing business to fit the challenges and opportunities of the industry," the report said.

"Plants where production costs and long-term feeding trends are not favorable to growth are eliminated. There is a single plant manager at each plant and he is responsible for that plant's making a profit."

The company stated that now the local manager is in a position to react swiftly and profitably to local market changes.

Prospects Improved

The grain merchandising division of the company looks forward to the coming year with prospect of improved revenue. Two new offices have been opened to augment 20 located in principal producing areas. Volume of this division reached a new high during the year although revenue was down slightly and net reduced by increased expenses — mainly for higher interest rates on funds used to carry inventories.

Returning to a more normal growth pattern after an exceptional 1959 was the feed ingredient merchandising division. It was reported that the volume and revenue of that operation continued upward. Total production of feed ingredients is expected to increase this year which would improve the outlook for revenue, the annual report said.

New Facilities

Work in progress on a new flour mill in Los Angeles will enable Pillsbury to better serve markets for flour in that growing area of the country, the report states.

The company exercised an option on a 40-acre site for a new consumer mix plant in Bridgeton, Mo., near St. Louis.

Four administrative and organizational developments during the year designed to strengthen Pillsbury research and development activities included: Salary and title structures which will open opportunities for scientists doing pure research work; the recruitment of highly trained personnel; refinements in the project concept of work organization which brings necessary skills to bear on research projects and increased appropriations for research and development work, according to the report.

Overseas business developments during the year were flour licensing and technical assistance agreements in El Salvador and Guatemala, a formula feed operation in Guatemala and a partnership to build a flour mill in Ghana.

Production of Fish Meal, Scrap Down

WASHINGTON — Seventeen thousand tons of fish meal and scrap were produced in the U.S. during May, according to figures from the U.S. Department of the Interior. That is a decline of 36% from 1959.

Five month figures show 30,000 tons of meal and scrap were produced January through May, 27% below the same period of 1959.

Production of meal and scrap from Maine herring in the five months was up to 512 tons from 105 tons in 1959; Menhaden was down to 16,352 from 26,699 tons; tuna and mackerel was up to 9,542 from 8,531 tons; unclassified production was down to 3,324 from 5,575 tons in 1959, the figures show.

EXCHANGE

(Continued from page 6)

ment of Agriculture started incorporating exchange sales with other confirmed prices." Exchange sales are the dominant factor in these quotations, according to Mr. Tatum, "and the net result is a true picture of market prices actually paid for live broilers."

Another achievement of the exchange has been in the upgrading of quality, says Mr. Tatum. "Good producers were simply not getting a top price for quality chickens. Now, we offer premium broilers under one contract and inferior birds are sold as another grade, thus rewarding competent growers."

The Center auction draws broilers from several hundred miles, but the majority of birds sold at the local exchange come from within a 75 mile radius of Center. Shelby County and the immediate vicinity has the largest concentration of broiler production in the state, and local capacity is being increased annually.

Unique Operation

The Southwest Poultry Exchange auction is unique in this section and the mechanics of its operation do not resemble any other agricultural marketing system. Buyers are seated in private booths on the exchange floor. Mr. Tatum, who is also the auctioneer, obtains bids on an electronic board, which flashes the price bid by each buyer, who makes his offer by simply pressing a button in his booth. The action of each buyer is invisible to all other buyers. The seller of any particular lot of birds sits at the lighted board with Mr. Tatum and can observe the progress of bidding. If he is dissatisfied with the final bid, he may withdraw the lot from the day's sale.

The exchange is a non-profit organization and Mr. Tatum says it has satisfactorily met expenses for the first year with the commission of $1 per thousand broilers that it receives from sellers.

Exchange personnel includes Mr. Tatum, secretaries Juanice Powell and Doris Brown and inspectors Pascal Adams, Gene Partin and J. T. Goodwin.

There are 35 stockholders in the exchange, and each is a member of its board of directors. Officers are president, Frank Sisco, Nacogdoches; first vice president, R. C. Wright, Nacogdoches; second vice president, Roy Herider, Center; third vice president, Porter Halbert, Hemphill, and secretary-treasurer, Harold McDonald, Center. All officers are members of the executive committee along with Gene Biddle, Center; Aubrey Pilgrim, Pittsburg; Max Wenmohs, Jasper; Allen Sturrock, Hemphill, and Tim Burgess and Buddy Anderson, Nacogdoches.

Memphis Reopens Bean Meal Contracts

MEMPHIS, TENN.—The Memphis Board of Trade reopened the Eastern Trunk Line soybean oil meal contract on a 50% basis Aug. 1. That was the same contract on the board when ETL trading was ceased last fall. The original ETL contract was 44%.

It replaces the Memphis basis contract, which went on the board after ETL trading had been dropped.

Midwestern processors requested that the Memphis Board of Trade reopen the ETL market since there was no ETL contract available to them.

Dividends by Dow

MIDLAND, MICH.—The board of directors of Dow Chemical Co. this week declared a 2% stock dividend—one share for each 50 held—in addition to a quarterly cash dividend of 35¢ per share on its common stock.

Both dividends are payable to stockholders of record at the close of business Sept. 16.

Cartoned Egg Contest Planned for Northeast Council's Exposition

TRENTON, N.J. — Brands of cartoned eggs known in the Northeast will compete for honors in a market egg show to be held in conjunction with the annual exposition of the Northeastern Poultry Producers Council in Syracuse, N.Y.

The three-day conclave, which opens Oct. 4 in the War Memorial Building, will spotlight this new competition as a result of the increasing attention being given to improving egg quality. Heading up the show committee will be Leslie Driggs, New York Department of Agriculture egg specialist.

Comparisons

For producers, distributors and retailers, the contest forms an ideal medium for measuring how their particular brand stacks up against others in the Northeast—in quality of pack and in all-important sales and merchandising features.

Three classes have been established for the event. The first is for cartoned eggs with a producer brand. This is for producers selling their own production under their own name or farm name. There are two classes, for white and brown eggs—both subdivided into large and medium sizes.

The second division in the contest is for consumer cartoned eggs packed under a distributor brand. This is for receivers selling wholesale quantities under their brand or trade name to retail stores. The third division is for firms selling eggs at retail in their own cartons, under a brand or trade name through retail outlets under their own management.

"We expect that consumers and consumer publications will keep a close eye on this competition," Mr. Driggs declared. "In the judging we will give 78 points out of a possible 100 for egg quality. The remaining 22 will be allocated for such things as choice of name, attractiveness of package, color and clarity of message."

Sept. 12 Deadline

Sept. 12 has been set as the deadline for entries. Eggs must be delivered to the exposition in the War Memorial Building by Oct. 3. Each contestant will be entitled to have only one entry in each weight class. No eggs of less than "A" quality will be acceptable. Those below will be cut in accordance with the score card.

Applications for entries must be sent to the NEPPCO Market Egg Show, 10 Rutgers Place, Trenton 8, prior to mid-September so that sufficient space may be allocated for exhibits.

Hay Price Factors Reverse in Nevada

RENO, NEV. — Factors that normally operate to set Nevada hay prices are working in reverse this year, according to William V. Neely, extension economist at the Agricultural Extension Service.

Normally, Nevada hay prices are governed by the Los Angeles prices less transportation costs to the southern California area. However, this year California fringe area prices plus transportation to Nevada are setting the Nevada prices.

The Max C. Fleischmann College of Agriculture economist said that the change in the operation of the pricing factors is a result of a short hay crop in Nevada. The short crop will also mean that Nevada will be importing hay from California instead of exporting it to California, he added.

California hay delivered in western Nevada the week of July 28 was commanding a price of $29.50 ton. Local alfalfa hay, being of higher quality, will probably command a premium of a few dollars more a ton, he predicted.

MARKETS

(Continued from page 2)

up rather closely to the week just preceding. Demand is anything but aggressive but, at the same time, it is heavy enough to keep mills operating on a 36-40 hour week.

If anything, the volume of business probably is just a very little better than during late July, and more or less typical of what is to be expected following a spring and early summer of lush pasture. An excellent crop of feed grains is in sight, although neither corn nor grain sorghum crops will be nearly as large as last year.

However, with carryovers of both the latter commodities at all-time high levels, the prospective supply of farm feeds for 1960-61 is so plentiful that it cannot help but have some impact on the demand for commercial mixed feeds.

South Central

This week's formula feed business is about on a par with that of the preceding week. Demand is described as being "rather listless." This is in line with expectations, as August generally is not noted for being a month of aggressive feed demand. Mill operating time continues to vary between four and five days at most mills.

Good pasture conditions are still holding down the volume of dairy and cattle feed sales. The present siege of hot, dry weather gives some hope that drying pastures will result in a revival of interest in supplemental feeding. Pig feed sales are good; hog feed sales are down from their top level, but together they continue as the mainstay of mill operations.

Ingredient prices hold within a narrow range, and brokers report a slow demand. With ample supplies available at fairly steady prices, both feed manufacturers and dealers are following a conservative inventory policy.

Ohio Valley

Sales of formula feeds continued their slow but steady upward movement this week, with all types of feeds, excepting hay, being involved. Looking back over the six-month period, manufacturers reported that their business volume was only slightly below that of a year earlier, largely due to the quite satisfactory pick-up recorded during July.

A favorable factor this summer has been the increased rainfall, which has eliminated the serious drouth conditions experienced during the spring and summer months of several recent years.

According to a weather bureau report this week, July was a cool month, with temperatures averaging 2.2° below normal; while 4.97 in. of rainfall were recorded, or 1.27 in. above average. The July weather was described by manufacturers as being "nearly perfect" for the growing and harvesting of farm crops, and it is not now anticipated that any serious drouth conditions will develop during the fall months.

Prices for farm animals and eggs at valley stockyards and wholesale markets moved within narrow price ranges this week, with supplies adequate to meet the draggy demand, caused by the absence of many thousands of vacationing families.

Pacific Northwest

Formula feed trading continued to hold up throughout Oregon, Washington and Idaho, with sales of poultry feeds still setting the pace on a seasonal basis.

Offerings of most feed ingredients appeared adequate to plentiful, while a limited few continued on the scarce side. New crop grain harvesting was nearing its peak in most sections, and provided abundant supplies. This factor restricted interest in concentrates to some extent and offset recent deterioration of pastures and ranges because of hot, dry weather.

Quotations for soybean and linseed meals advanced $1 a ton, while values increased $1.50 a ton for wheat mill feeds. Meat and bone meal listings declined $3 a ton, while whole corn values dropped 75¢, barley was off 50¢ a ton, and oats values were cut 50¢ to $1 a ton.

Pacific Northwest hay trading continued slow, with prices easier for the ample supply. A wide range of $29-34 continued to rule at Portland and Seattle on a baled basis.

INDEX OF ADVERTISERS

The index of advertisers is provided as a service to readers and advertisers. The publisher does not assume any liability for errors or omissions.

Abbott Laboratories 24
Aeroglide Corp. 76
Albumina Supply .....
Allied Chemical Corporation, Nitrogen Division .....
Allied Chemical Corp., Plastic & Coal Chemicals Div. ....
Allied Mills .....
Amburgo Mills 44, 89, 95
American Cyanamid Co. ...36, 37
American Dehydrators Assn...
American Elev. & Grain Div. . 84
American Poultry & Hatchery Fed. .....
American Scientific Lab. ....
Anderson Box .....
Anderson, V. D., Co. 46
Arbor Acres Farm 22
Association of Mill & Elev. Mutual Ins. Cos. .....
Aubrey Feeds .....

Barnard & Leas Mfg. Co., Inc. 22
Baroid Chemicals, Inc., Subsidiary of Natl. Lead Co.
Bartlett, C. O., & Snow Co. . 89
Baughman Mfg. Co., Inc. ....
Baxter, A. E., Engineering Co. 78
Beardstown Mills Co. .....
Behlen Mfg. .....
Bemis Bro. Bag Co. 69
Berg, Paul .....
Bigelow Sales Co. 99
Bin-Dicator Co. .....
Bisbing Business Research ....
Black, Sivalls & Bryson, Inc.
Blatchford Calf Meal Co. 79
Blomfield-Swanson .....
Borden Co. 31
Bowman Feed Prod. 44
Bremco Alfalfa Milling .....
Brower Manufacturing Co. ... 95
Brown, Jeff D., & Co. .....
Bryant Engineering Co. .....
Burlap Council .....
Burrows Equipment Co. 95
Butler Chemical Co. 32
Butler Mfg. Co. 42

C-K Processing Co. .....
Calcium Carbonate Co. 25
California Pellet Mill Co. . 79
Caple, A. B. 38
Cardinal Scale Mfg. Co. ....
Carey Salt .....
Central Soya Co., Inc. .....
Champion Portable Mill Co...
Chase Bag Co. 29
Checkerboard Grain Co. 96
Chemo Puro Subsidiary, Century Chemical Corp. ....
Chick-Master Incubator Co. ..
CIBA Pharmaceutical Products Inc. .....
Clinton Corn Processing Co...
Clofine, Herbert K. 38
Clupak, Inc. 15
Collier Livestock-Feeder Co. . 72
Columbia Phosphate Co. 44
Columbia Quarry Co. 30
Columbian Steel Tank Co. ....
Commercial Solvents Corp. .. 9
Consolidated Blenders, Inc. . 99
Consolidated Quarries Div., The Georgia Marble Co...
Cooper, O. A., Co. .....
Corn Products Sales Co. ....
Curl Eng. & Mfg. Corp. ....
Custom Millers Supply Co. ... 70
Czarnitow Rionda 89

Daffin Mfg. Co. .....
Dannen Mills, Inc. 74
Darling & Co. .....
Davies, Wm. .....
Davis Enterprises .....
Dawe's Laboratories, Inc. 23
Day Company, The .....
Daycom, Inc. 72
Delaware Poultry Laboratories 70
Devold, Peder, Oil Co. 77
Diamond Alkali Co. .....
Diamond V Mills, Inc. .....
Distillation Products Industries 45
Distillers Feed Research Council 81
Doane Ag. Service .....
Doane Feed Products Co. ..72, 73
Dodgen Industries .....
Dorn & Mitchell Laboratories.
Douglas Chemical Co. .....
Dow Chemical Co. 12, 13
Dunbar-Kappie .....
Duplex Mill & Mfg. Co. 35
Du Pont de Nemours & Co., Inc., E. I. .....

Eastman Chemical Prod., Inc. 38
Ehrsam, J. B., & Sons Mfg. Co., The .....
Elanco Products Co. 43
Elba Corp. of America 16
Eriez Mfg. 7
Eschenheimer, Rudy, Co. ....
Ewing, Ray, Co. 84

Fairfield Eng. .....
Fischbein, Dave .....
Fitzpatrick, U. E., & Co. ..
Flavor Corp. of America ...
Fly-Cord, Inc. .....
Food Mech. & Chem. Corp...
Forster Mfg. Co. .....
Fox Co. 39
Fruen Milling Co. 18
Fuller Co. .....

Gaddis Bros. Mfg. .....
Gerber Sheet Metal, Inc. ...
Gladwin-Read .....
Gorton-Pew Fisheries 100
Grace Chemical Div. .....
Grain Processing Corp. 67
Gump, B. F., Co. 14

Hales & Hunter Co. 95
Hall Distributor Co. .....
Hand, Peter, Foundation 3, 14
Harris Lab. .....
Harshaw Chemical Co. .....
Hayes & Stolz Ind. Mfg. Co.
Heil Co., The .....
Heim Mfg. Co. .....
Henke Mfg. Co. .....
Hess & Clark, Inc. .....
Heterochemical Corp. 91
Hilltop Lab. .....
Hoffman-Taff, Inc. 93
Hogenson Const. Co. .....
Hogg, N. D., Ltd. .....
Holt Products 76
Honeggers' & Co. 104
Hooker Chemical .....
Howes, S., Co., Inc. .....
Hubbard Milling Co. .....
Hubbell, Charles H. .....

Ibbersen, T. E., Co. .....
Illinois Soy Products Co. ...
International Minerals & Chemical Corp. 5
International Salt Co., Inc...
Iowa Limestone Co. .....
Iowa Portable Mill .....
Iowa Soya Co. 80

Jackson, Gilbert, Co., Inc. ..
Jacobson Machine Works 28
Jersee Co. .....

K. & S. Metal Prod. 95
Kansas City Millwright Co...
Kansas Soya Prod. Co., Inc...
Kees & Company 35
Kellogg Co. 70
Kem Mfg. Co. .....
Kent Feeds .....
Kent, Percy, Bag Co., Inc...
Kindstrom-Schmoll Co. .....
Koelsch, Charles J., Grain Co
Koppers Co., Inc. .....
Kraft Bag Corp. 64
Kraft Foods Co. .....

Laboratory Construction Co...
LaBudde Feed & Grain Co. .. 89
Landers Mill Mfg. Co. .....
Land O'Lakes Creameries, Inc.
Lauhoff Grain Co. 76
Leach Mfg. Co. 73
Limestone Products Corp. of America 66
Loncala Phosphate Co. .....
Longhorn Engineering Co. ...

McCabe Grain Co., Ltd. 69
McMillen Feed Mills .....
Magnus, Mabee & Reynard..
Maney Bros. Mill & Elev. Co. 100
Marco Chemical Co. .....
Marine & Animal By-Products Corp. .....
Master-Bilt Refrigeration Mfg. Co. 40
Mayo Shell Corp. 74
Meine Mfg. .....
Merck & Co. 17, 63, 83
Mid-Continent Grain Co. 44
Mid-States Construction Co...
Midwest Alfalfa Blenders, Inc. 30
Midwest Dried Milk Co. ....
Milbrew Co. .....
Miles Chemical Co. .....
Miller High Life Grain Co. .. 82
Miller Mfg. .....
Miller, Mel, & Co., Inc. ....
Miller Publishing Co., The ..
Minneapolis Sewing Machine.
Minnesota Linseed Oil Co. ... 46
Minute Maid Corp. .....
Monsanto Chem. Co. 71
Morton Chemical Co. 78, 79
Morton Salt Co. 11
Myers-Sherman Co. 75

Nagel, Herman, Co. 80
Natl. Alfalfa Dehydrating & Mlg. Co. .....
Natl. Distillers Prod. Co. ...
National Lead Co. .....
National Molasses Co. 32
National Renderers Assn. ....
Nellis Feed Co. .....
New Bedford Fish Prod. Co...
New Century Co., The .....
New England By-Prod. Corp. 100
New Way Mfg. Co. .....
Newsome Comm. Co. .....
Nichols, Incorporated 87
Nootbaar, H. V., & Co. .....
Nopco Chemical Co. 96
North American Mfg. Co. ..
North American Trading & Import Co. 61
Northern Biochemical Corp...
N. W. Alfalfa .....
Nor-Vell, Inc. .....
Nutrena Mills 16, 28, 34, 38, 41, 42, 46, 59, 68, 78, 88, 90
Nutri-Lab. Mixing Corp. ....

Olavarria & Co. 73
Olin Mathieson Chem. Co. ...
Oyster Shell Corp. 92
Oyster Shell Prod. Co. 62

Pabst Brewing Co. 34
Panagen Co. .....
Paper, Calmenson & Co. 78
Park, Philip R., Inc. 62
Parks, J. P., Inc. 100
Parrish & Heimbecker .....
Parrish, N. K. 42
Paxton Processing Co. 98
Pay Way Feeds .....
Peavey, F. H., & Co. 35
Penick, S. B., & Co. 61
Perma Weld .....
Peterson Breeding Farm 73
Peterson Sales Co. .....
Pfizer, Chas., & Co., Inc. .. 47-58
Phelps-Dodge Refining Corp. . 74
Plich's Poultry Breeding Farm
Pittsburgh Plate Glass Co. ..
Pless, Joe N., Co. .....
Pockman Mfg. Co. 92
Pope Testing Lab. .....
Poultry By-Products .....
Prater Pulverizer Co. 59
Pritchard, M. T., Inc. .....
Productive Acres Mfg. Co. .. 10
Professional Feeds Div. .....
Publicker Industries, Inc. ....

Quaker Oats Co. 46

Ralston Purina Co. .....
Rapids Machinery Co. 77
Read, Gladwin .....
Red Comb Pioneer Mills, Inc. 95
Red River Alfalfa Co. .....
Reliance Feed Co. .....
Richardson Scale Co. .....
Riley Feed Co. .....
Rion Crush Stone Corp. ....
Rocky Mountain Phosphate ...
Rohm & Haas Co. .....
Roskamp Huller Co. .....
Ross Machine & Mill Supply, Inc. .....
Ross Mfg. Co. .....
Ryde & Co. 66

St. Regis Paper Co. .....
Salsbury's, Dr., Labs. 20, 21
Scanlan, Ivan, & Co. .....
Schenley Distillers, Inc. ....
Schutte Pulverizer Co., Inc...
Scott Paper 33
Screw Conveyor Corp. 94
Seagram, Joseph E., & Sons, Inc. 85
Security Mills .....
Sedberry, J. B. 18
Seedburo Equipment Co. 90
Shanzer Mfg. .....
Shelby Mfg. .....
Shellbuilder Co. 77
Sievert, C. W. .....
Simonsen Mfg Co. .....
Small, The W. J., Co. 100
Smith, A. O., Corp. .....
Smith-Douglass Co., Inc. 27
Soft Phosphate Research Inst., Inc. .....
Sohio Chemical Co. .....
Southeran Dist. Co. .....
Southwest Mill Supply Co. ..
Specifide, Inc. 93
Spencer Kellogg & Sons, Inc. 28
Sprout, Wildron & Co., Inc. .....
Squibb, E. R. .....
Stabilized Vitamins .....
Standard Brands, Inc. 42, 66, 76
Star-Kist Foods 84
Stearns Magnetic Products ..
Sterwin Chemicals Inc. 75, 76
Stone Mountain Grit .....
Stran-Steel Corp. .....
Strong-Scott Mfg. Co. .....
Sudenga Industries .....
Sunset Feed & Grain Co. 88
Superior Boiler Works 30
Superior Co. .....
Superior Feed Co. 61
Sutorbilt Corp. .....
Swanson, Carroll, Sales Co. . 34
Sweet Peak Feed Co. .....
Syntha Lab. 61

Taste Engineering Co. .....
Texas Mill Equipment Co. ..
Thompson-Hayward Chem. Co. 61
Three Dehy Companies .....
Tobias Enterprises .....
Toledo Scale .....
Toxite Laboratories .....
Tyson-Smith Co. .....

Ultra-Life Laboratories, Inc. . 75
Union Bag-Camp Paper Corp. 45
Union Special Machine Co. .. 80
U. S. Industrial Chem. Co...
Universal Hoist Co. .....

Van Dusen Harrington Co. ... 35
Vantress, Chas., Farms, Inc...
Vineland Laboratories, Inc. .. 86
Vineland Poultry Lab. .....
Vit-A-Way, Inc. .....
Vitren Corp. .....
Vy Lactos Laboratories, Inc...

W-W Grinder Corporation ... 26
Wallace & Tiernan Inc. .....
Warner Brooder .....
Warren-Douglas Chem. Co. ..
Waltz-Hattelsater Engineers ..
Wells, Ralph, & Co. 92
Welp's Breeding Farm 95
Wenger Mixer Mfg. Co. 93
Wertz Feed Products .....
Western Condensing Co. 88
Western Yeast Co. 86
West Virginia Pulp & Paper Co. .....
White Shell Corp. 28
Whitmoyer Laboratories, Inc. 30
Wilhoit Laboratory .....
Wilson & Co. .....
Wilson, R. S., Co. 74
Wirthmore Feeds 19
Wisconsin Alumni Research Foundation .....
Woods Construction Co. ....
Wyatt Mfg. .....

Young, John 64

Elected President

COLUMBUS, OHIO—David H. McVey, a former vice president of General Mills, has been elected president of Capital City Products Co. in Columbus, according to a recent announcement.

Mr. McVey, associated with General Mills for 30 years, was general manager of the feed division when he left the company last year.

Capital City Products Co. is a refiner of vegetable oils and produces oleomargarine, shortening and hard butter.

Memphis Site for Soybean Meeting

STUTTGART, ARK. — The great expansion in soybean production in the mid-south in recent years was behind the selection of Memphis, Tenn., as the site of the joint American Soybean Assn.-National Soybean Processors Assn. meetings this year, says Jake Hartz, Jr., Jacob Hartz Seed Co., ASA past president and chairman of the resolutions committee this year.

The 40th annual convention of the American Soybean Assn. and the annual meeting of the National Soybean Processors Assn. are being held Aug. 22-23 at Hotel Peabody, with joint afternoon sessions.

"It may not be generally realized that the six mid-south states of Missouri, Arkansas, Kentucky, Tennessee, Louisiana and Mississippi now produce almost a third of the U.S. soybean crop, being second only to the North Central states, long the center of soybean production," says Mr. Hartz.

Soybean production took an amazing jump—almost tripling—in these six states in the five years following the last ASA-NSPA meetings in Memphis in 1954. In 1954, total production in these states was 48.5 million bu., about one-seventh of the 341 million bu. produced nationwide that year. But in 1959, the six states grew 144 million bu. out of a national crop of 538 million bushels.

Arkansas ranked third in acreage harvested and fourth in the nation in soybean production in 1959, behind only Illinois, Iowa and Indiana.

And soybean acreage has shown another half-million jump in 1960, with the largest increases coming in Missouri, Arkansas and Louisiana. The four states — Iowa, Arkansas, Missouri and Indiana—are now closely tied for second place in soybean production, with Illinois easily in first place.

The American Soybean Assn. has directors from mid-south states. They are: Mr. Hartz; Harry Gatton, Jr., Rumsey, Ky.; Walter M. Scott, Jr., Tallulah, La.; Glen Myers, Memphis, Mo., and O. H. Acom, Wardell, Mo.

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